



Frank O'Bannon  
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Commissioner

August 28, 2003

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TO: Interested Parties / Applicant  
RE: RMG Foundry / #141-6087-00007  
FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and

- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency  
401 M Street  
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.



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## **PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY**

**RMG Foundry, LLC d/b/a RMG Foundry  
500 South Union Street  
Mishawaka, Indiana 46544**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 141-6087-00007	
Issued by: Original signed by Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: August 28, 2003 Expiration Date: August 28, 2008

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee owns and operates a stationary gray and ductile iron foundry source.

Responsible Official:	Tom Jones
Source Address:	500 South Union Street, Mishawaka, Indiana 46544
Mailing Address:	500 South Union Street, Mishawaka, Indiana 46544
General Source Phone:	219-256-4330
SIC Code:	3321
County Location:	St. Joseph
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

#### **Melting Operations - Department 31**

- (a) Three (3) electric induction furnaces, known as EU 1-1 (also known as point 31P), installed in 1974, exhausted to Stack 47, capacity: 7.0 tons of gray or ductile iron per hour, each.
- (b) One (1) inoculation operation, known as EU 1-2, installed before 1974, released to the melting or foundry areas general building ventilation, capacity: 7.0 tons of molten iron per hour.
- (c) One (1) charge handling operation, known as EU 1-3, installed in 1974, released to the melting or foundry areas general building ventilation, capacity: 21.0 tons of iron and scrap per hour.
- (d) One (1) natural gas-fired scrap preheater, known as EU 1-4, installed in 1995, combustion exhausted to Stack 31, scrap preheating equipped with a baghouse, known as preheater B/H, for PM control and process exhausted to Stack 50, rated at 12.0 million British thermal units per hour, capacity: 21.0 tons of iron and scrap per hour.

#### **East Foundry Operations- Department 24**

- (e) One (1) large pinlift operation, consisting of a molding operation and a pouring area, known as EU 2-1, installed in 1975. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.

- (f) One (1) small pinlift operation, consisting of a molding operation and a pouring area, known as EU 2-2, installed in 1975. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (g) One (1) shakeout operation, known as EU 2-3, installed in 1975, equipped with a baghouse, known as East Foundry B/H, exhausted to Stack 49, capacity: 7.0 tons of iron castings per hour.
- (h) One (1) sand handling operation, known as EU 2-4 (also known as point 35P), installed in 1975, equipped with a baghouse, known as East Foundry B/H, exhausted to Stack 49, capacity: 50.0 tons of sand per hour.
- (i) One (1) premix silo, known as EU 2-5, equipped with a static bin vent filter, installed in 1979, connected to Stack 15, throughput capacity: 5.0 tons of premix per hour, storage capacity: 35 tons of premix.
- (j) One (1) new sand silo, known as EU 2-6, installed before 1974, equipped with a baghouse, known as East Foundry B/H, exhausted to Stack 49, filling capacity: 20.0 tons per hour of sand, storage capacity: 25.0 tons of sand.
- (k) One (1) floor molding operation, consisting of a molding operation and a pouring area, known as EU 2-7, installed in 1895. The pouring area emissions are released to the floor molding area general building ventilation, capacity: 1.0 ton of molten iron castings per hour.

#### **South Foundry Operations - Department 26**

- (l) One (1) pinlift operation, consisting of a molding operation and a pouring area, known as EU 3-1, installed in 1959. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (m) One (1) slinger operation, consisting of a molding operation and a pouring area, known as EU 3-2, installed in 1959. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (n) One (1) shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, installed prior to 1970 and in 1979, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44, capacity: 8.5 tons of iron castings per hour.
- (o) One (1) sand handling operation, known as EU 3-4 (also known as point 33P), installed in 1959, equipped with a baghouse, known as South Foundry - Sand System B/H, exhausted to Stack 51, capacity: 60.0 tons of sand per hour.
- (p) One (1) new sand bin/hopper, known as EU 3-5, installed in 1986, released to the general building ventilation, throughput capacity: 1.8 tons per hour of sand, storage capacity: 2.0 tons of sand.
- (q) One (1) premix silo, known as EU 3-6, installed in 1979, equipped with a static bin vent filter, connected to Stack 38, throughput capacity: 6.0 tons of premix per hour, storage capacity: 35 tons of premix.
- (r) One (1) North SPO operation, consisting of a molding operation and a pouring area, known as EU 3-7, installed in 1959. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.

- (s) One (1) South SPO operation, consisting of a molding operation and a pouring area, known as EU 3-8, installed in 1959. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.

### **Middle Foundry Operations - Department 30**

- (t) One (1) Hunter molding, pouring and cooling line, consisting of a molding station, a pouring station, and a cooling conveyor, known as EU 4-1, installed in 1992, with only the molding unit, replaced in December 2000. The emissions from the pouring and cooling operations are controlled by a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 7.5 tons of molten iron per hour.
- (u) One (1) Sinto molding, pouring and cooling line, consisting of a molding station, a pouring station, and a cooling area, known as the Small Sinto, EU 4-2a and EU 4-2b, both installed in 1974, replaced in 1998. The emissions from the pouring operations (EU 4-2a) released to the general building ventilation, cooling operations (EU 4-2b), equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 6.0 tons of molten iron per hour, each.
- (v) One (1) shakeout operation, known as EU 4-3, installed in 1951, equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 15.0 tons of iron casting per hour.
- (w) One (1) sand handling operation, known as EU 4-4, installed before 1974, equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 70.0 tons of sand per hour.
- (x) One (1) new sand feed hopper, known as EU 4-5, installed before 1974, released to the general building ventilation, throughput capacity: 2.1 tons of sand per hour, storage capacity: 2.0 tons of sand.
- (y) One (1) Sinto molding, pouring and cooling line, consisting of a molding station, a pouring station, and a cooling area, known as the Large Sinto, EU 4-7. The emissions from the pouring and cooling operations, are controlled by a baghouse, known as Middle Foundry B/H, for PM control, exhausted to Stack 46, installed in 2001, capacity: 8.0 tons of molten iron per hour.

### **Cleaning and Finishing Operations - Department 29**

- (z) Three (3) mechanical blasters (wheel blast installed in 1971, rail blast installed in 1985 and #1 spinner hanger installed in 1970), known as EU 5-1 (also known as point 37P), equipped with a baghouse, known as Wheelabrator B/H, exhausted to Stack 43, capacity: 20.0 tons of shot per hour, total and 9.0 tons of metal per hour total.
- (aa) One (1) foundry paint booth, known as EU 5-2, equipped with airless assisted spray applicators, equipped with dry filters for overspray control, installed before 1968, exhausted to Stack 100, capacity: 5.0 gallons of paint per hour.
- (bb) One (1) grinding operation, known as EU 5-3 (also known as point 32P), installed before 1974, consisting of a small side grinding area with eleven (11) grinders, equipped with a central baghouse, known as grinding baghouse, exhausted to Stack 42, and a large side grinding area with eleven (11) grinding booths, booths 1 - 7, controlled by the grinding baghouse, booths 8 and 9, equipped with a cyclone, exhausted to Stack 16A, and booths 10 and 11, equipped with a Torit baghouse, exhausted to Stack 16, capacity: 13.65 tons of

castings per hour.

- (cc) One (1) #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, installed in 1974 and replaced in 1991, equipped with a baghouse, known as #2 Spinner hanger B/H, exhausted to Stack 5, capacity: 2.0 tons of steel shot per hour and 4.5 tons of metal per hour.
- (dd) Two (2) Tumbblast mechanical blasters, known as EU 5-6, installed before 1968, equipped with a baghouse, known as Tumbblast B/H, exhausted to Stack 45, capacity: 2.0 tons per hour of steel shot, total and 4.5 tons of metal per hour.
- (ee) Miscellaneous solvent usage, known as EU 6-5, installed before 1968, released to the general building ventilation, capacity: 0.005 ton per hour of Stoddard solvent.

#### **Core Making Operations - Department 27**

- (ff) One (1) muller sand silo, known as EU 7-1, installed in prior to 1968, equipped with a static bin vent filter, connected to Stack 11, filling capacity: 20 tons of sand per hour, 900 standard cubic feet per minute flow rate, used only for truck deliveries.
- (gg) One (1) iso-set core-making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, installed in 1979, equipped with a counter current packed bed scrubber for SO<sub>2</sub> control, known as SO<sub>2</sub> scrubber, released to the general building ventilation, capacity: 4.5 tons of sand per hour, 126 pounds of iso-set resin per hour, and 67.5 pounds of SO<sub>2</sub> per hour.
- (hh) One (1) Laempe LL 30 core machine, known as EU 7-4b, installed in 2000, equipped with a scrubber for SO<sub>2</sub> control, known as the Laempe scrubber, capacity: 3.0 tons of sand per hour, 84 pounds of epoxy resin per hour, and 45 pounds of SO<sub>2</sub> per hour.
- (ii) One (1) pep-set core-making process, consisting of two (2) Palmer core machines, known as EU 7-5, installed in 1985, capacity: 13.0 tons of sand per hour, 313 pounds of pep-set per hour.
- (jj) One (1) sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, installed in 1979, equipped with a static bin vent filter, connected to Stack 58A, filling capacity: 20.0 tons of sand per hour, 900 standard cubic feet per minute flow rate, used only for truck deliveries.
- (kk) One (1) sand silo - pepset/isoset, known as EU 7-7, installed in 1979, equipped with a static bin vent filter, connected to Stack 58, filling capacity: 20.0 tons of sand per hour, 900 standard cubic feet per minute flow rate, used only for truck deliveries.
- (ll) Two (2) Shalco 315 core machines, known as EU 7-8, installed in 2001, equipped with an existing scrubber associated with the Laempe core machine, EU 7-4b for SO<sub>2</sub> control, exhausted in the core room, capacity: 5.0 tons of sand per hour, 140 pounds of epoxy resin per hour, and 75 pounds of SO<sub>2</sub> per hour, total.
- (mm) The core room raw material handling system is a pneumatic transfer system that delivers sand from EU 7-7 to feed bins for EU 7-4a, EU 7-4b, EU 7-5 and EU 7-8, capacity: 9.0 tons of sand per hour total, 150 standard cubic feet per minute of conveying air. The conveying air for EU 7-5 is discharged through EU 7-6. The conveying air for EU 7-4a, EU 7-4b and EU 7-8 is discharged indoors through individual static bin vents, equipped with cartridge filters. EU 7-6 and EU 7-7 are connected to each other by a vent tube so that the static

vents in each function in parallel, equipped with cartridge filters.

### Combustion

- (nn) Two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, installed in 1968, exhausted to Stack 88 and Stack 88A, respectively, rated at 16.4 million British thermal units per hour, each.

#### A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities as defined in 326 IAC 2-7-1(21) which are specifically regulated:

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. (326 IAC 6-1)
- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. (326 IAC 6-1)
- (c) Other activities or categories not previously identified with emissions equal to or less than the insignificant thresholds of five (5) pounds per hour or twenty-five (25) pounds per day for PM, SO<sub>2</sub>, and/or NO<sub>X</sub>, three (3) pounds per hours or fifteen (15) pounds per day for VOC, twenty-five (25) pounds per day for CO or 0.6 tons per year or 3.29 pounds per day of lead:
- (1) Powder coating, equipped with dry filters, capacity: 255 units per hour. (326 IAC 6-1)
- (2) Holding furnace, known as Ajax. (326 IAC 6-1)
- (3) Rod furnace. (326 IAC 6-1)
- (d) Asbestos abatement projects regulated by 326 IAC 14-10.
- (e) Natural gas-fired combustion source with heat input equal to or less than ten million (10,000,000) British thermal units per hour: One (1) burn-off oven with an integral after-burner, rated at 0.4 million British thermal units per hour. This burn-off oven is designed for removing excess coatings from paint line fixtures and parts to be coated and is not to be used for any other purpose. (326 IAC 4-2)

This stationary source also includes the following insignificant activities as defined in 326 IAC 2-7-1(21) which are not specifically regulated:

- (f) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour (total 55.933 million British thermal units per hour):
- (1) One (1) cure oven, rated at 3.5 million British thermal units per hour.
- (2) One (1) washer, rated at 1.5 million British thermal units per hour.

- (3) One (1) dry-off oven, rated at 1.5 million British thermal units per hour.

Department 10

- (4) One (1) Door Blast Heater, rated at 0.5 million British thermal units per hour.

Department 23/40

- (5) One (1) gas unit heater rated at 0.250 million British thermal units per hour.
- (6) One (1) gas unit heater rated at 0.225 million British thermal units per hour.
- (7) One (1) radiant heater rated at 0.030 million British thermal units per hour.

Department 24

- (8) Two (2) ladle heaters rated at 0.115 million British thermal units per hour, each.
- (9) Ten (10) radiant gas heaters rated at 0.053 million British thermal units per hour, each.
- (10) One (1) air makeup unit rated at 5.000 million British thermal units per hour.
- (11) One (1) air makeup unit rated at 6.000 million British thermal units per hour.
- (12) One (1) ladle heater rated at 1.000 million British thermal units per hour.

Department 26

- (13) One (1) gas unit heater rated at 0.260 million British thermal units per hour.
- (14) Four (4) ladle heaters rated at 0.500 million British thermal units per hour, each.
- (15) Four (4) ladle heaters rated at 1.000 million British thermal units per hour, each.
- (16) One (1) air makeup unit rated at 10.000 million British thermal units per hour.

Department 27

- (17) One (1) gas radiant heater rated at 0.053 million British thermal units per hour.
- (18) One (1) core oven rated at 0.270 million British thermal units per hour.
- (19) One (1) shell core machine, Harrison 1616 rated at 0.145 million British thermal units per hour.
- (20) Three (3) core machines, Shalco V-180 rated at 0.400 million British thermal units per hour, each.
- (21) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

Department 29

- (22) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

(23) One (1) gas radiant heater rated at 0.053 million British thermal units per hour.

Department 30

(24) One (1) ladle heater rated at 0.115 million British thermal units per hour.

(25) Three (3) ladle heaters rated at 0.088 million British thermal units per hour, each.

(26) Two (2) ladle heaters rated at 0.500 million British thermal units per hour, each.

Department 31

(27) One (1) gas air makeup unit rated at 3.000 million British thermal units per hour.

(28) Three (3) ladle heaters rated at 1.000 million British thermal units per hour, each.

(29) One (1) ladle heater rated at 0.115 million British thermal units per hour.

(30) Five (5) gas radiant heaters rated at 0.053 million British thermal units per hour, each.

(31) Two (2) gas unit heaters rated at 0.105 million British thermal units per hour, each.

(32) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

(33) Two (2) Ajax torches.

Department 39

(34) One (1) gas air makeup unit rated at 7.500 million British thermal units per hour.

Foundry Locker Room

(35) One (1) gas unit heater rated at 0.250 million British thermal units per hour.

(g) Propane for liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour.

(h) Combustion source flame safety purging on startup.

(i) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(j) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(2) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

(k) Refractory storage not requiring air pollution control equipment.

- (l) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.
- (m) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (n) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (o) Cleaners and solvents characterized as follows:
  - (1) having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF) or;
  - (2) having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (p) Closed loop heating and cooling systems.
- (q) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (r) Noncontact cooling tower systems with either of the following: Forced and induced draft cooling tower system not regulated under a NESHAP.
- (s) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (t) Paved and unpaved roads and parking lots with public access.
- (u) Asbestos abatement projects regulated by 326 IAC 14-10.
- (v) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (w) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (x) On-site fire and emergency response training approved by the department.
- (y) Other emergency equipment as follows: Stationary fire pumps.
- (z) Purge double block and bleed valves.
- (aa) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38EC).
- (bb) A laboratory as defined in 326 IAC 2-7-1(21)(D).

A.4 Emission Units and Pollution Control Equipment Eliminated From Service

This stationary source has eliminated from service the following previously permitted facilities and pollution control devices: These facilities are no longer permitted to operate.

- (a) The one (1) wire feed system for the inoculation of ductile iron in Department 26, permitted under CP 141-3867-00007, issued on September 20, 1994.
- (b) One (1) paint dip tank prime coat, permitted under D 1 132, issued January 6, 1993 and January 6, 1997, eliminated in 1997.
- (c) One (1) Binks paint spray booth, permitted under D 1 135, issued January 6, 1993 and January 6, 1997, eliminated in 1997.
- (d) One (1) paint dip tank (prime coat), permitted under D 1 137, issued January 6, 1993 and January 6, 1997, eliminated in 1993.
- (e) One (1) manual pulley blast booth, known as EU 12-1, installed in 1986, equipped with a baghouse for PM control, released to the general ventilation, capacity: 0.5 tons of steel shot per hour, removed from the foundry in 1999.
- (f) One (1) pulley cleaning operation, known as EU 12-2, installed in 1970, released to the general building ventilation, capacity: 0.0015 tons of solvent per hour, removed from the foundry in 1999.
- (g) One (1) pulley lagging application operation, known as EU 12-3, installed in 1986, equipped with hand rollers, released to the general building ventilation, capacity: 0.00075 tons of adhesive per hour, removed from the foundry in 1999.
- (h) One (1) natural gas-fired refuse incinerator, known as EU 11-1, rated at 1.9 million British thermal units per hour, capacity: 800 pounds of refuse per hour, limited to 750 tons of refuse per year, permitted under D 1 175, issued January 6, 1993 and January 6, 1997 removed from service in April 1999.
- (i) One (1) standby coal-fired boiler rated at 13 million British thermal units per hour.
- (j) One (1) shot blast cleaning machine for charge.
- (k) One (1) Squeezers molding, pouring and cooling line, known as EU 4-6, installed in 1959, released to the general building ventilation, capacity: 1.5 tons of molten iron per hour, removed by SSM 141-13749 in 2001.

#### Department 11

- (l) One (1) steel shop paint booth, known as EU 6-1, equipped with assisted airless spray applicators, equipped with dry filters for overspray control, installed before 1968, exhausted to Stack 4, capacity: 5.0 gallons of paint per hour.
- (m) One (1) 60 horsepower boiler rated at 2.511 million British thermal units per hour.
- (n) One (1) conveyor drive paint booth, known as EU 8-2, installed in 1970, equipped with air-assisted airless spray applicators, equipped with dry filters for overspray control, exhausted to Stack 99, capacity: 5.0 gallons of paint per hour.

#### A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);

- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## SECTION B GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

### B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

### B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

### B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

### B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

### B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

(a) As provide in 326 IAC 2-7-5(6), the Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:

- (1) Enforcement action;
- (2) Permit termination, revocation and reissuance, or modification; or
- (3) Denial of a permit renewal application.

(b) Noncompliance with any provisions of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.

- (c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

**B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]**

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

**B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]**

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;

- (3) Whether compliance was continuous or intermittent;
- (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
- (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]  
[326 IAC 1-6-3]

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OM&M) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

Telephone Number: 219-245-4870 (Northern Regional Office)

Facsimile Number: 219-245-4877 (Northern Regional Office)

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (h) Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

**B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]**

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) In addition to the nonapplicability determinations set forth in Sections D of this permit, the IDEM, OAQ has made the following determinations regarding this source:
  - (1) The Part 70 application for this foundry was submitted in June 1996, therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable during this permit term.
  - (2) The two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, installed in 1968, rated at 16.4 million British thermal units per hour, each, are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.4), Subpart Dc, since these boilers were installed prior to the June 9, 1989 applicability date for this rule.

- (3) The following National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63) are not applicable to this source.
  - (A) The degreaser is not subject to 40 CFR 63, Subpart T since it does not use any halogenated solvents.
  - (B) A single HAP is limited to less than ten (10) tons per year and the combination of HAPs is limited to less than twenty-five (25) tons per year in the foundry paint booth, therefore, the requirements of 40 CFR Part 63 Subpart B are not applicable to the foundry paint booth.
- (4) As of the date of issuance of this permit none of the following emission units are subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) because these emission units were constructed prior to the August 7, 1977, PSD applicability date:
  - (A) Melting Operations - Department 31
    - (1) Three (3) electric induction furnaces, known as EU 1-1 (also known as point 31P), installed in 1974.
    - (2) One (1) inoculation operation, known as EU 1-2, installed before 1974.
    - (3) One (1) charge handling operation, known as EU 1-3, installed 1974.
  - (B) East Foundry Operations- Department 24
    - (4) One (1) large pinlift molding, pouring and cooling line, known as EU 2-1, installed in 1975.
    - (5) One (1) small pinlift molding, pouring and cooling line, known as EU 2-2, installed in 1975.
    - (6) One (1) shakeout operation, known as EU 2-3, installed in 1975.
    - (7) One (1) sand handling operation, known as EU 2-4 (also known as point 35P), installed in 1975.
    - (8) One (1) new sand silo, known as EU 2-6, installed before 1974.
    - (9) One (1) floor molding, pouring and cooling line, known as EU 2-7, installed in 1895.
  - (C) South Foundry Operations - Department 26
    - (10) One (1) pinlift molding, pouring and cooling line, known as EU 3-1, installed in 1959.
    - (11) One (1) slinger molding, pouring and cooling line, known as EU 3-2, installed in 1959.

- (12) One (1) shakeout operation, known as EU 3-3 (also known as point 34P), only one (1) of two (2) shakeout units, installed prior to 1970.
  - (13) One (1) sand handling operation, known as EU 3-4 (also known as point 33P), installed in 1959.
  - (14) One (1) North SPO molding, pouring and cooling line, known as EU 3-7, installed in 1959.
  - (15) One (1) South SPO molding, pouring and cooling line, known as EU 3-8, installed in 1959.
- (D) Middle Foundry Operations - Department 30
- (16) One (1) shakeout operation, known as EU 4-3, installed in 1951.
  - (17) One (1) sand handling operation, known as EU 4-4, installed before 1974.
  - (18) One (1) new sand feed hopper, known as EU 4-5, installed before 1974.
- (E) Cleaning and Finishing Operations - Department 29
- (20) Two (2) mechanical blasters (wheel blast and #1 spinner hanger), known as EU 5-1 (also known as point 37P), installed in 1971 and 1970, respectively.
  - (21) One (1) foundry paint booth, known as EU 5-2, installed before 1968.
  - (22) One (1) grinding operation, known as EU 5-3 (also known as point 32P), installed before 1974.
  - (23) Two (2) tumblast mechanical blasters, known as EU 5-6, installed before 1968.
- (F) Conveyor Drive Fabrication Operations - Department 11
- (24) Miscellaneous solvent usage, known as EU 6-5, installed before 1968.
- (G) Core Making Operations - Department 27
- (25) One (1) muller sand silo, known as EU 7-1, installed in prior to 1968.
- (H) Combustion
- (26) Two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, installed in 1968.

- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
  - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

**B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]**

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- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive

measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]**

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

**B.17 Permit Renewal [326 IAC 2-7-4]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by

the “responsible official” as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

(1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-7-3]

If the Permittee submits a timely and complete application for renewal of this permit, the source’s failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

(d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]

If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

**B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

**B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]**

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- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

**B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]**

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:
  - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
  - (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
  - (4) The Permittee notifies the:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015  
  
and  
  
United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590  
  
in advance of the change by written notification at least ten (10) days in advance copy of this permit; and
  - (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20 (b), (c), or (e) and makes such records available, upon reasonable request, for

public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
  - (2) The date on which the change will occur;
  - (3) Any change in emissions; and
  - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC13-17-3-2 and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC13-17-3-2 and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC13-17-3-2 and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC13-17-3-2 and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, I/M and Billing Section), to determine the appropriate permit fee.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

#### C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

#### C.4 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

#### C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

#### C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

#### C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

### **Testing Requirements [326 IAC 2-7-6(1)]**

#### **C.8 Performance Testing [326 IAC 3-6]**

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### **C.9 Compliance Requirements [326 IAC 2-1.1-11]**

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

### **Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

#### **C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

**C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

**C.12 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]**

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- (b) The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one (1) pH point.
- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

**C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the source must comply with the applicable requirements of 40 CFR 68.

C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

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- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
  - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:

- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

**C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]**

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

- (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
  - (2) Indicate estimated actual emissions of regulated pollutants (as defined by 326 IAC 2-7-1(32) ("Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified

mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

### **Stratospheric Ozone Protection**

#### **C.20 Compliance with 40 CFR 82 and 326 IAC 22-1**

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

### **Part 2 MACT Application Submittal Requirement**

#### **C.21 Application Requirements for Section 112(j) of the Clean Air Act [40 CFR 63.52(e)] [40 CFR 63.56(a)] [40 CFR 63.9(b)] [326 IAC 2-7-12]**

- (a) The Permittee shall submit a Part 2 MACT Application in accordance with 40 CFR 63.52(e)(1). The Part 2 MACT Application shall meet the requirements of 40 CFR 63.53(b).
- (b) Notwithstanding paragraph (a), the Permittee is not required to submit a Part 2 MACT Application if the Permittee no longer meets the applicability criteria of 40 CFR 63.50 by the application deadline in 40 CFR 63.52(e)(1). For example, the Permittee would not have to submit a Part 2 MACT Application if, by the application deadline:
  - (1) The source is no longer a major source of hazardous air pollutants, as defined in 40 CFR 63.2;
  - (2) The source no longer includes one or more units in an affected source category for which the U.S. EPA failed to promulgate an emission standard by May 15, 2002; or
  - (3) The MACT standard or standards for the affected source categories included at the source are promulgated.
- (c) Notwithstanding paragraph (a), pursuant to 40 CFR 63.56(a), the Permittee shall comply with an applicable promulgated MACT standard in accordance with the schedule provided in the MACT standard if the MACT standard is promulgated prior to the Part 2 MACT

Application deadline or prior to the issuance of permit with a case-by-case Section 112(j) MACT determination. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), the Permittee shall submit an initial notification not later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The initial notification shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Director, Air and Radiation Division  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]: Melting Operations - Department 31

- (a) Three (3) electric induction furnaces, known as EU 1-1 (also known as point 31P), installed in 1974, exhausted to Stack 47, capacity: 7.0 tons of gray or ductile iron per hour, each.
- (b) One (1) inoculation operation, known as EU 1-2, installed before 1974, released to the melting or foundry areas general building ventilation, capacity: 7.0 tons of molten iron per hour.
- (c) One (1) charge handling operation, known as EU 1-3, installed in 1974, released to the melting or foundry areas general building ventilation, capacity: 21.0 tons of iron and scrap per hour.
- (d) One (1) natural gas-fired scrap preheater, known as EU 1-4, installed in 1995, combustion exhausted to Stack 31, scrap preheating equipped with a baghouse, known as preheater B/H, for PM control and process exhausted to Stack 50, rated at 12.0 million British thermal units per hour, capacity: 21.0 tons of iron and scrap per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Emission Offset Minor Limit [326 IAC 2-3]

- (a) The PM emissions from the natural gas-fired scrap preheater, known as EU 1-4, shall not exceed 5.70 pounds per hour. Therefore, the requirements of 326 IAC 2-3 do not apply.
- (b) Pursuant CP 141-4053-00007, issued January 13, 1995, the PM<sub>10</sub> emissions from the natural gas-fired scrap preheater, known as EU 1-4, shall not exceed 3.42 pounds per hour. Therefore, the requirements of 326 IAC 2-3 do not apply.

#### D.1.2 Particulate Matter (PM) [326 IAC 6-1-18]

Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the three (3) electric induction furnaces, known as EU 1-1, exhausted to Stack 47 shall not exceed:

- (a) 0.09 grains per dry standard cubic foot of outlet air, equivalent to 19.3 pounds per hour at a flow rate of 25,000 dry standard cubic feet per minute and
- (b) A total of 37.5 tons per twelve (12) consecutive month period. The three (3) electric induction furnaces, known as EU 1-1, will comply by meeting the following limits:
  - (1) PM emissions shall not exceed 0.9 pounds of PM per ton of iron melted, and
  - (2) Metal throughput to the furnaces shall not exceed 83,333 tons of gray and ductile iron per twelve (12) consecutive month period with compliance determined at the end of each month.

#### D.1.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1-2 (Nonattainment area particulate limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) 0.03 grains per dry standard cubic foot of outlet air from the scrap preheater, known as EU 1-4, combustion exhausted to Stack 31 and process exhausted to Stack 50, equivalent to 1.03 pounds per hour at a flow rate of 4,000 dry standard cubic feet per minute for Stack 50.
- (b) 0.03 grains per dry standard cubic foot of outlet air from the inoculation operation, known as EU 1-2, and the charge handling operation, known as EU 1-3, both released to the melting or foundry areas general ventilation.

#### D.1.4 Fuel Type

Pursuant to CP 141-4053-00007, issued January 13, 1995, natural gas shall be the only fuel used in the operation of the scrap preheater (EU 1-4).

#### D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for three (3) electric induction furnaces, known as EU 1-1 and the scrap preheater, known as EU 1-4 and its control device.

### Compliance Determination Requirements

#### D.1.6 Particulate Matter (PM)

In order to comply with Conditions D.1.1 and D.1.3, the baghouse for PM control shall be in operation and control emissions from the scrap preheater, known as EU 1-4, at all times that the scrap preheater is in operation.

### Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

#### D.1.7 Visible Emissions Notations

- (a) Visible emission notations of the three (3) electric induction furnaces, known as EU 1-1 Stack exhaust 47 and of the scrap preheater, known as EU 1-4, Stack exhaust 50 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.1.8 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the scrap preheater, known as EU 1-4, at least once per shift when the scrap heater is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water, the Permittee shall take

reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.1.9 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bags controlling the scrap preheater, known as EU 1-4, when venting to the atmosphere. A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.1.10 Broken or Failed Bag Detection

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.1.11 Record Keeping Requirements

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- (a) To document compliance with Condition D.1.2(b), the Permittee shall maintain records of the amount of gray and ductile iron melted in three (3) electric induction furnaces, known as EU 1-1 on a monthly basis.
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain records of visible emission notations of the Stack exhausts 47 and 50 once per shift when operating normally, during daylight hours.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the

atmosphere.

- (d) To document compliance with Condition D.1.9, the Permittee shall maintain records of the results of the inspections required under Condition D.1.9 and the dates the vents are redirected.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.12 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.2(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]: East Foundry Operations- Department 24

- (e) One (1) large pinlift operation, consisting of a molding operation and a pouring area, known as EU 2-1, installed in 1975. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (f) One (1) small pinlift operation, consisting of a molding operation and a pouring area, known as EU 2-2, installed in 1975. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (g) One (1) shakeout operation, known as EU 2-3, installed in 1975, equipped with a baghouse, known as East Foundry B/H, exhausted to Stack 49, capacity: 7.0 tons of iron castings per hour.
- (h) One (1) sand handling operation, known as EU 2-4 (also known as point 35P), installed in 1975, equipped with a baghouse, known as East Foundry B/H, exhausted to Stack 49, capacity: 50.0 tons of sand per hour.
- (i) One (1) premix silo, known as EU 2-5, equipped with a static bin vent filter, installed in 1979, connected to Stack 15, throughput capacity: 5.0 tons of premix per hour, storage capacity: 35 tons of premix.
- (j) One (1) new sand silo, known as EU 2-6, installed before 1974, equipped with a baghouse, known as East Foundry B/H, exhausted to Stack 49, filling capacity: 20.0 tons per hour of sand, storage capacity: 25.0 tons of sand.
- (k) One (1) floor molding operation, consisting of a molding operation and a pouring area, known as EU 2-7, installed in 1895. The pouring area emissions are released to the floor molding area general building ventilation, capacity: 1.0 ton of molten iron castings per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 PSD Minor Limit [326 IAC 2-2]

The total throughput of sand to premix silo, known as EU 2-5, and to EU 3-6, EU 7-6 and EU 7-7 combined shall not exceed 15,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

- (a) PM emissions from the premix silo, known as EU 2-5, shall not exceed 0.27 pounds of PM per ton of sand.
- (b) PM<sub>10</sub> emissions from the premix silo, known as EU 2-5, shall not exceed 0.27 pounds of PM<sub>10</sub> per ton of sand.

Compliance with these limits renders the requirements of 326 IAC 2-2 not applicable.

#### D.2.2 Particulate Matter (PM) [326 IAC 6-1-18]

Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the sand handling operation, known as EU 2-4 and the shakeout operation, known as EU 2-3, (also known as point 35P) exhausted to Stack 49

shall not exceed:

- (a) 0.01 grains per dry standard cubic foot of outlet air, equivalent to 2.83 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute and
- (b) 3.16 tons per year. The sand handling operation, known as EU 2-4 and the shakeout operation, known as EU 2-3, will comply by meeting with the following limits:
  - (1) PM emissions from Stack 49 shall not exceed 0.036 pounds of PM per ton of sand handled and 0.032 pounds of PM per ton of castings.
  - (2) The Permittee shall not exceed a limit of 150,000 tons of sand per twelve (12) consecutive month period in the sand handling operation, known as EU 2-4 and 25,000 tons of castings per twelve (12) consecutive month period process by the shakeout operation, known as EU 2-3.

#### D.2.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) 0.03 grains per dry standard cubic foot of outlet air from the premix silo, known as EU 2-5, connected to Stack 15, equivalent to 0.231 pounds per hour at a flow rate of 900 dry standard cubic feet per minute.
- (b) 0.03 grains per dry standard cubic foot of outlet air from the new sand silo, known as EU 2-6, exhausted to Stack 49, equivalent to 8.49 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute.
- (c) 0.03 grains per dry standard cubic foot of outlet air from the large and small pinlift pouring, and cooling operations, known as EU 2-1 and EU 2-2.
- (d) 0.03 grains per dry standard cubic foot of outlet air from the floor pouring, and cooling operation, known as EU 2-7.

#### D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for shakeout operation, known as EU 2-3, the sand handling operation, known as EU 2-4, the premix silo, EU 2-5, and their control devices.

### **Compliance Determination Requirements**

#### D.2.5 Particulate Matter (PM)

- (a) In order to comply with Conditions D.2.1 and D.2.3, the bin vent filter for PM control shall be functional and control emissions from the premix silo, known as EU 2-5, at all times that the premix silo is in operation.
- (b) In order to comply with Conditions D.2.2 and D.2.3, the baghouse for PM control shall be in operation and control emissions from the shakeout operation, known as EU 2-3, from the sand handling operation, known as EU 2-4, and the new sand silo, known as EU 2-6, at all times that the shakeout, sand handling processes and the new sand silo are in operation.

#### D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 36 months after issuance of this permit in order to demonstrate compliance with Conditions D.2.2 and D.2.3, the Permittee shall perform PM testing of the shakeout operation (EU 2-3), the

sand handling operation (EU 2-4) and the new sand silo (EU 2-6), all exhausting through Stack 49 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.2.7 Visible Emissions Notations**

- (a) Visible emission notations of the shakeout operation, known as EU 2-3, the sand handling operation, known as EU 2-4, and the new sand silo, known as EU 2-6, Stack exhaust 49 as well as the premix silo, known as EU 2-5, Stack exhaust 15 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### **D.2.8 Parametric Monitoring**

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the shakeout operation, known as EU 2-3, the sand handling operation, known as EU 2-4, and the new sand silo, known as EU 2-6, at least once per shift when these facilities are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### **D.2.9 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the shakeout operation, known as EU 2-3, the sand handling operation, known as EU 2-4, and the new sand silo, known as EU 2-6, when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.2.10 Broken or Failed Bag Detection

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.2.11 Record Keeping Requirements

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- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records of the total throughput of sand to the premix silo, known as EU 2-5, as well as to EU 3-6, EU 7-6 and EU 7-7 combined on a monthly basis.
- (b) To document compliance with Condition D.2.2(b)(2), the Permittee shall maintain records of the throughput of sand in the sand handling system, known as EU 2-4 on a monthly basis.
- (c) To document compliance with Condition D.2.7, the Permittee shall maintain records of visible emission notations of the Stack exhausts 49 and 15 once per shift when operating normally, during daylight hours.
- (d) To document compliance with Condition D.2.8, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.
- (e) To document compliance with Condition D.2.9, the Permittee shall maintain records of the results of the inspections required under Condition D.2.9 and the dates the vents are redirected.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.12 Reporting Requirements

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A quarterly summary of the information to document compliance with Conditions D.2.1 and D.2.2(b)(2) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does

require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

### SECTION D.3

### FACILITY OPERATION CONDITIONS

#### Facility Description [326 IAC 2-7-5(15)]: South Foundry Operations - Department 26

- (l) One (1) pinlift operation, consisting of a molding operation and a pouring area, known as EU 3-1, installed in 1959. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (m) One (1) slinger operation, consisting of a molding operation and a pouring area, known as EU 3-2, installed in 1959. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (n) One (1) shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, installed prior to 1970 and in 1979, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44, capacity: 8.5 tons of iron castings per hour.
- (o) One (1) sand handling operation, known as EU 3-4 (also known as point 33P), installed in 1959, equipped with a baghouse, known as South Foundry - Sand System B/H, exhausted to Stack 51, capacity: 60.0 tons of sand per hour.
- (p) One (1) new sand bin/hopper, known as EU 3-5, installed in 1986, released to the general building ventilation, throughput capacity: 1.8 tons per hour of sand, storage capacity: 2.0 tons of sand.
- (q) One (1) premix silo, known as EU 3-6, installed in 1979, equipped with a static bin vent filter, connected to Stack 38, throughput capacity: 6.0 tons of premix per hour, storage capacity: 35 tons of premix.
- (r) One (1) North SPO operation, consisting of a molding operation and a pouring area, known as EU 3-7, installed in 1959. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (s) One (1) South SPO operation, consisting of a molding operation and a pouring area, known as EU 3-8, installed in 1959. The pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

#### Emission Limitations and Standards [326 IAC 2-7-5(1)]

##### D.3.1 PSD Minor Limit [326 IAC 2-2]

- (a) The PM emissions from the shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44 shall not exceed 5.03 pounds per hour.
- (b) The PM<sub>10</sub> emissions from the shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44 shall not exceed 3.02 pounds per hour.
- (c) The total throughput of sand to premix silo, known as EU 3-6, and to EU 2-5, EU 7-6 and EU 7-7 combined shall not exceed 15,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

- (1) PM emissions from the premix silo, known as EU 3-6, shall not exceed 0.27 pounds of PM per ton of sand.
- (2) PM<sub>10</sub> emissions from the premix silo, known as EU 3-6, shall not exceed 0.27 pounds of PM<sub>10</sub> per ton of sand.

Compliance with these limits renders the requirements of 326 IAC 2-2 not applicable.

#### D.3.2 Particulate Matter (PM) [326 IAC 6-1-18]

- (a) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the shakeout operation, known as EU 3-3, exhausted to Stack 44 shall not exceed:
  - (1) 0.012 grains per dry standard cubic foot of outlet air, equivalent to 2.78 pounds per hour at a flow rate of 27,000 dry standard cubic feet per minute and
  - (2) 5.17 tons per year.
- (b) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the sand handling operation, known as EU 3-4, exhausted to Stack 51 shall not exceed:
  - (1) 0.017 grains per dry standard cubic foot of outlet air, equivalent to 4.01 pounds per hour at a flow rate of 27,500 dry standard cubic feet per minute and
  - (2) 6.66 tons per twelve (12) consecutive month period. The sand handling operation, known as EU 3-4, will comply by meeting the following limits:
    - (A) PM emissions from Stack 51 shall not exceed 0.036 pounds of PM per ton of sand handled.
    - (B) The Permittee shall not exceed a limit of 373,737 tons of sand per twelve (12) consecutive month period with compliance determined at the end of each month in the sand handling operation, known as E 3-4.

#### D.3.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) 0.03 grains per dry standard cubic foot of outlet air from the premix silo, known as EU 3-6, exhausted to Stack 38, equivalent to 0.231 pounds per hour at a flow rate of 900 dry standard cubic feet per minute.
- (b) 0.03 grains per dry standard cubic foot of outlet air from the pinlift and slinger pouring, and cooling operations, known as EU 3-1 and EU 3-2, the new sand bin/hopper, known as EU 3-5 as well as the North and South SPO operation, known as EU 3-7 and EU 3-8.

#### D.3.4 VOC [326 IAC 2-3]

The throughput of iron castings to the shakeout operation, known as EU 3-3, shall be limited to less than 66,666 tons per twelve (12) consecutive month period and VOC emissions shall not exceed 1.20 pounds per ton of casting, equivalent to VOC emissions of less than forty (40.0) tons per year in order to make the requirements of 326 IAC 2-3 not applicable.

#### D.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the shakeout operation, known as EU 3-3, the sand handling operation, known as EU 3-4, and the premix silo, known as EU 3-6, and their control devices.

### **Compliance Determination Requirements**

#### D.3.6 Particulate Matter (PM)

- (a) In order to comply with Conditions D.3.1 and D.3.2, the baghouses for PM control shall be in operation and control emissions from the shakeout operation, known as EU 3-3 and the sand handling operation, known as EU 3-4, at all times that the shakeout and sand handling processes are in operation.
- (b) In order to comply with Condition D.3.3, the bin vent filter for PM control shall be functional and control emissions from the premix silo, known as EU 3-6, at all times that the premix silo is in operation.

#### D.3.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 36 months after issuance of this permit in order to demonstrate compliance with Condition D.3.2(b)(1), the Permittee shall perform PM testing of the sand handling operation (EU 3-4) exhausting through Stack 51 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### D.3.8 Visible Emissions Notations

- (a) Visible emission notations of the shakeout operation, known as EU 3-3, the sand handling operation, known as EU 3-4 and the premix silo, known as EU 3-6, Stack exhausts 44, 51 and 38 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.3.9 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the shakeout and sand handling operations, known as EU 3-3 and EU 3-4 at least once per shift when shakeout and sand handling are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouses are outside the normal range of 2.0 and

8.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.3.10 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bags controlling the shakeout and sand handling operations when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.3.11 Broken or Failed Bag Detection

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.3.12 Record Keeping Requirements

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- (a) To document compliance with Condition D.3.1(c), the Permittee shall maintain records of the total throughput of sand to the premix silo, known as EU 3-6, as well as to EU 2-5, EU 7-6 and EU 7-7 combined on a monthly basis.
- (b) To document compliance with Condition D.3.2(b)(2)(B), the Permittee shall maintain records of the throughput of sand in the sand handling system, known as EU 3-4 on a monthly basis.
- (c) To document compliance with Condition D.3.4, the Permittee shall maintain records of the iron castings throughput to the shakeout operation, known as EU 3-3 on a monthly basis.

- (d) To document compliance with Condition D.3.8, the Permittee shall maintain records of visible emission notations of the Stack exhausts 44, 51 and 38 once per shift when operating normally, during daylight hours.
- (e) To document compliance with Condition D.3.9, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.
- (f) To document compliance with Condition D.3.10, the Permittee shall maintain records of the results of the inspections required under Condition D.3.10 and the dates the vents are redirected.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.3.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.3.1(c), D.3.2(b)(2)(B) and D.3.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.4

## FACILITY CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]: Middle Foundry Operations - Department 30

- (t) One (1) Hunter molding, pouring and cooling line, consisting of a molding station, a pouring station, and a cooling conveyor, known as EU 4-1, installed in 1992, with only the molding unit, replaced in December 2000. The emissions from the pouring and cooling operations are controlled by a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 7.5 tons of molten iron per hour.
- (u) One (1) Sinto molding, pouring and cooling line, consisting of a molding station, a pouring station, and a cooling area, known as the Small Sinto, EU 4-2a and EU 4-2b, both installed in 1974, replaced in 1998. The emissions from the pouring operations (EU 4-2a) released to the general building ventilation, cooling operations (EU 4-2b), equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 6.0 tons of molten iron per hour, each.
- (v) One (1) shakeout operation, known as EU 4-3, installed in 1951, equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 15.0 tons of iron casting per hour.
- (w) One (1) sand handling operation, known as EU 4-4, installed before 1974, equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 70.0 tons of sand per hour.
- (x) One (1) new sand feed hopper, known as EU 4-5, installed before 1974, released to the general building ventilation, throughput capacity: 2.1 tons of sand per hour, storage capacity: 2.0 tons of sand.
- (y) One (1) Sinto molding, pouring and cooling line, consisting of a molding station, a pouring station, and a cooling area, known as the Large Sinto, EU 4-7. The emissions from the pouring and cooling operations, are controlled by a baghouse, known as Middle Foundry B/H, for PM control, exhausted to Stack 46, installed in 2001, capacity: 8.0 tons of molten iron per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.4.1 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) 0.03 grains per dry standard cubic foot of outlet air from the Hunter pouring and cooling operations, known as EU 4-1, the Sinto cooling line operation, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and the Sinto pouring and cooling operation, known as EU 4-7, exhausted to Stack 46, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute.
- (b) 0.03 grains per dry standard cubic foot of outlet air from the new sand feed hopper, known as EU 4-5, and the Sinto pouring operations, known as EU 4-2a, both released to the Middle Foundry general ventilation.

D.4.2 Particulate Matter (PM) [326 IAC 2-2]

- (a) In order to render the requirements of 326 IAC 2-2 not applicable for emissions from the Hunter pouring and cooling operations, known as EU 4-1, the Sinto cooling operation, known as EU 4-2b and the Sinto pouring and cooling line operation, known as EU 4-7:
- (1) The particulate matter (PM) emission rate from the Middle Foundry baghouse Stack 46 shall not exceed 0.03 grains per dry standard cubic foot of outlet air, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute, and
  - (2) The PM<sub>10</sub> emission rate from the Middle Foundry baghouse Stack 46 shall not exceed 0.03 grains per dry standard cubic foot of outlet air, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute.
- (b) In order to render the requirements of 326 IAC 2-2 not applicable the throughput of metal to the Sinto pouring and cooling line, known as EU 4-2a and EU 4-2b, shall be limited to less than 19,240 tons per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to PM emissions from pouring of less than a total of 27.0 tons per year and equivalent to PM<sub>10</sub> emissions of less than a total of 13.25 tons per year. Total PM emissions from the Sinto are limited to 37.5 tons per year and total PM<sub>10</sub> emissions are limited to 18.4 tons per year.

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the Hunter pouring and cooling line, known as EU 4-1, Sinto cooling line, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto pouring and cooling line, known as EU 4-7 and any control devices.

**Compliance Determination Requirements**

D.4.4 Particulate Matter (PM)

In order to comply with Conditions D.4.1 and D.4.2, the baghouse for PM control shall be in operation and control pouring and cooling emissions from the Hunter molding, pouring, and cooling line, known as EU 4-1, emissions from the Sinto cooling operation, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and pouring and cooling emissions from the Sinto molding, pouring and cooling line, known as EU 4-7, at all times that the molding, pouring, and cooling lines, shakeout and sand handling processes are in operation.

D.4.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 180 days after issuance of this permit in order to demonstrate compliance with Conditions D.4.1(a) and D.4.2, the Permittee shall perform PM and PM<sub>10</sub> testing of the Middle Foundry baghouse exhaust, Stack 46, controlling emissions from Hunter pouring and cooling operations, known as EU 4-1, Sinto cooling operation, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto pouring and cooling operations, known as EU 4-7, as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing. All associated facilities exhausting to a single stack shall be operating when determining compliance with the overall limits.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.4.6 Visible Emissions Notations**

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- (a) Visible emission notations of the Hunter molding, pouring and cooling line, known as EU 4-1, Sinto molding and cooling line, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto molding, pouring and cooling line, known as EU 4-7, Stack exhaust 46 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

### **D.4.7 Parametric Monitoring**

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The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the Hunter pouring and cooling operations, known as EU 4-1, Sinto cooling operation, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto pouring and cooling operations, known as EU 4-7, at least once per shift when these processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

### **D.4.8 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of all bags controlling the Hunter pouring and cooling operations, known as EU 4-1, Sinto cooling operation, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto pouring and cooling operations, known as EU 4-7, when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

### **D.4.9 Broken or Failed Bag Detection**

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### D.4.10 Record Keeping Requirements

- (a) To document compliance with Condition D.4.2, the Permittee shall maintain records of the throughput of metal to EU 4-2a and EU 4-2b.
- (b) To document compliance with Condition D.4.6, the Permittee shall maintain records of visible emission notations of the Stack exhaust 46 once per shift when operating normally, during daylight hours.
- (c) To document compliance with Condition D.4.7, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.
- (d) To document compliance with Condition D.4.8, the Permittee shall maintain records of the results of the inspections required under Condition D.4.8 and the dates the vents are re-directed.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

##### D.4.11 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.5

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]: Cleaning and Finishing Operations - Department 29

#### Cleaning and Finishing Operations - Department 29

- (z) Three (3) mechanical blasters (wheel blast installed in 1971, rail blast installed in 1985 and #1 spinner hanger installed in 1970), known as EU 5-1 (also known as point 37P), equipped with a baghouse, known as Wheelabrator B/H, exhausted to Stack 43, capacity: 20.0 tons of shot per hour, total and 9.0 tons of metal per hour total.
- (aa) One (1) foundry paint booth, known as EU 5-2, equipped with airless assisted spray applicators, equipped with dry filters for overspray control, installed before 1968, exhausted to Stack 100, capacity: 5.0 gallons of paint per hour.
- (bb) One (1) grinding operation, known as EU 5-3 (also known as point 32P), installed before 1974, consisting of a small side grinding area with eleven (11) grinders, equipped with a central baghouse, known as grinding baghouse, exhausted to Stack 42, and a large side grinding area with eleven (11) grinding booths, booths 1 - 7, controlled by the grinding baghouse, booths 8 and 9, equipped with a cyclone, exhausted to Stack 16A, and booths 10 and 11, equipped with a Torit baghouse, exhausted to Stack 16, capacity: 13.65 tons of castings per hour.
- (cc) One (1) #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, installed in 1974 and replaced in 1991, equipped with a baghouse, known as #2 Spinner hanger B/H, exhausted to Stack 5, capacity: 2.0 tons of steel shot per hour and 4.5 tons of metal per hour.
- (dd) Two (2) Tumbblast mechanical blasters, known as EU 5-6, installed before 1968, equipped with a baghouse, known as Tumbblast B/H, exhausted to Stack 45, capacity: 2.0 tons per hour of steel shot, total and 4.5 tons of metal per hour.
- (ee) Miscellaneous solvent usage, known as EU 6-5, installed before 1968, released to the general building ventilation, capacity: 0.005 ton per hour of Stoddard solvent.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.5.1 PSD Minor Limit [326 IAC 2-2]

(a) Pursuant CP 141-4010-00007, issued August 30, 1995:

- (1) The PM emissions from the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, shall be limited to 2.26 pounds per hour. Therefore, the requirements of 326 IAC 2-2 do not apply.
- (2) The PM<sub>10</sub> emissions from the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, shall not exceed 3.42 pounds per hour. Therefore, the requirements of 326 IAC 2-2 do not apply.
- (3) The opacity from the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, shall not exceed ten percent (10%) for any six (6) minute average (24 readings taken in accordance with EPA Method 9, Appendix A). Compliance with this opacity limit shall also satisfy the opacity requirements of 326 IAC 5-1-2.

- (b) The PM emissions from the rail blast mechanical blaster, known as EU 5-1, shall be limited to less than 5.70 pounds per hour. Therefore, the requirements of 326 IAC 2-2 do not apply.
- (c) The PM<sub>10</sub> emissions from the rail blast mechanical blaster, known as EU 5-1, shall be limited to less than 3.42 pounds per hour. Therefore, the requirements of 326 IAC 2-2 do not apply.

#### D.5.2 Particulate Matter (PM) [326 IAC 6-1-18]

- (a) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1 exhausted to Stack 43 shall not exceed:
  - (1) 0.015 grains per dry standard cubic foot of outlet air, equivalent to 2.38 pounds per hour at a flow rate of 18,500 dry standard cubic feet per minute, and
  - (2) 5.5 tons per year.
- (b) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the grinding operation, known as EU 5-3, exhausted to Stack 42 shall not exceed:
  - (1) 0.001 grains per dry standard cubic foot of outlet air, equivalent to 0.231 pounds per hour at a flow rate of 27,000 dry standard cubic feet per minute, and
  - (2) 5.5 tons per year.

#### D.5.3 Particulate Matter (PM) [326 IAC 6-1]

- (a) Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from booths 8 and 9 of EU 5-3, equipped with a cyclone, shall not exceed 0.03 grains per dry standard cubic foot of outlet air exhausted to Stack 16A, equivalent to 0.386 pounds per hour at a flow rate of 1,500 dry standard cubic feet per minute.
- (b) Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from booths 10 and 11 of EU 5-3, equipped with a Torit baghouse, shall not exceed 0.03 grains per dry standard cubic foot of outlet air exhausted to Stack 16, equivalent to 0.771 pounds per hour at a flow rate of 3,000 dry standard cubic feet per minute.
- (c) Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4 shall not exceed 0.03 grains per dry standard cubic foot of outlet air exhausted to Stack 5, equivalent to 0.643 pounds per hour at a flow rate of 2,500 dry standard cubic feet per minute.
- (d) Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the two (2) Tumblast mechanical blasters, known as EU 5-6, shall not exceed 0.03 grains per dry standard cubic foot of outlet air, exhausted to Stack 45, equivalent to 2.57 pounds per hour at a flow rate of 10,000 dry standard cubic feet per minute.
- (e) Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rate from the one (1) paint booth, known as EU 5-2, shall not exceed 0.03 grains per dry standard cubic foot of outlet air.

#### D.5.4 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating applied to metal in foundry paint booth, known as EU 5-2, shall be limited to 3.5 pounds of VOCs per gallon of coating less water, as delivered to the applicator for any calendar day, for extreme performance coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

#### D.5.5 Hazardous Air Pollutants (HAPs) Limitations

- (a) The worst case single HAP delivered to the coating applicators in the foundry paint booth, known as EU 5-2, including cleanup solvents shall be less than a total of ten (10) tons per twelve (12) consecutive month period with compliance determined at the end of each month, and
- (b) The combination of HAPs delivered to the coating applicators in the foundry paint booth, known as EU 5-2, including cleanup solvents shall be less than a total of twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) Compliance with these HAP emission limitations may render the future requirements of 40 CFR 63 Subpart B not applicable to the foundry paint booth, known as EU 5-2 depending on the specific applicability provisions of the specific rule.

#### D.5.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the one (1) paint booth, known as EU 5-2, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4 and the two (2) tumblast mechanical blasters, known as EU 5-6, and their control devices.

### **Compliance Determination Requirements**

#### D.5.7 Particulate Matter (PM)

In order to comply with Conditions D.5.1, D.5.2 and D.5.3, the baghouses and cyclone for PM control shall be in operation and control emissions from the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6 at all times that these processes are in operation.

#### D.5.8 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition D.5.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

#### D.5.9 Particulate Matter (PM)

In order to comply with Condition D.5.3, the dry filters for PM control shall be in place and control emissions from the one (1) foundry paint booth, known as EU 5-2, at all times when the paint booth is in operation.

#### D.5.10 Hazardous Air Pollutants (HAPs)

Compliance with the HAPs usage limitations contained in Condition D.5.5 shall be determined using one (1) of the following:

- (a) The manufacturer's certified product data sheet,
- (b) The manufacturer's material safety data sheet, or
- (c) Sampling and analysis, using any of the following test methods, as applicable:
  - (1) 40 CFR Part 60, Method 24, Appendix A, shall be used to measure the total volatile HAP content of the coating materials.
  - (2) 40 CFR Part 63, Method 311, Appendix A, shall be used to measure HAP content in coating materials by direct injection into a gas chromatography.
  - (3) Upon written application by the Permittee, the commissioner may approve an alternative test method.

When an MSDS, a certified product data sheet, or other document specifies a range of values, the values resulting in the greatest calculated HAP emissions shall be used for determining compliance with Condition D.5.5.

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### D.5.11 Visible Emissions Notations

- (a) Visible emission notations of the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6, Stack exhausts 43, 42, 16, 16A, 5 and 45 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.5.12 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6 at least

once per shift when these processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouses are outside the normal range of 2.0 and 8.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.5.13 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6 when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.5.14 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### D.5.15 Cyclone Inspections

An inspection shall be performed each calendar quarter of the cyclone controlling the grinding operation (EU 5-3) when venting to the atmosphere. Inspections are optional when venting to the indoors.

#### D.5.16 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency

and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.5.17 Monitoring

- (a) At the beginning of each shift that the foundry spray booth, known as EU 5-2, is used, inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the foundry paint booth, known as EU 5-2, Stack 100 while the paint booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

#### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.5.18 Record Keeping Requirements

- (a) To document compliance with Condition D.5.4, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC content limits established in Condition D.5.4.
  - (1) The VOC content of each coating material and solvent used.
  - (2) A log of the dates of use if compliance is based on a daily volume weighted average. The amount of coating material and solvent less water used on daily basis when necessary to calculate the volume weighted VOC content of the coatings used for each day.
    - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
    - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
- (b) To document compliance with Condition D.5.5, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the HAPs usage limits established in Condition D.5.5.

- (1) The amount and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents; and
  - (2) The weight of the worst single HAP and the combination of HAPs emitted for each compliance period.
- (c) To document compliance with Condition D.5.11, the Permittee shall maintain records of visible emission notations of the Stack exhausts 43, 42, 5 and 45 once per shift when operating normally, during daylight hours.
  - (d) To document compliance with Condition D.5.12, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.
  - (e) To document compliance with Conditions D.5.13 and D.5.15, the Permittee shall maintain records of the results of the inspections required under Conditions D.5.13 and D.5.15 and the dates the vents are redirected.
  - (f) To document compliance with Conditions D.5.9 and D.5.17, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
  - (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.5.19 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.5.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**SECTION D.6**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]: Core Making Operations - Department 27**

- (ff) One (1) muller sand silo, known as EU 7-1, installed in prior to 1968, equipped with a static bin vent filter, connected to Stack 11, filling capacity: 20 tons of sand per hour, 900 standard cubic feet per minute flow rate, used only for truck deliveries.
- (gg) One (1) iso-set core-making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, installed in 1979, equipped with a counter current packed bed scrubber for SO<sub>2</sub> control, known as SO<sub>2</sub> scrubber, released to the general building ventilation, capacity: 4.5 tons of sand per hour, 126 pounds of iso-set resin per hour, and 67.5 pounds of SO<sub>2</sub> per hour.
- (hh) One (1) Laempe LL 30 core machine, known as EU 7-4b, installed in 2000, equipped with a scrubber for SO<sub>2</sub> control, known as the Laempe scrubber, capacity: 3.0 tons of sand per hour, 84 pounds of epoxy resin per hour, and 45 pounds of SO<sub>2</sub> per hour.
- (ii) One (1) pep-set core-making process, consisting of two (2) Palmer core machines, known as EU 7-5, installed in 1985, capacity: 13.0 tons of sand per hour, 313 pounds of pep-set per hour.
- (jj) One (1) sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, installed in 1979, equipped with a static bin vent filter, connected to Stack 58A, filling capacity: 20.0 tons of sand per hour, 900 standard cubic feet per minute flow rate, used only for truck deliveries.
- (kk) One (1) sand silo - pepset/isoset, known as EU 7-7, installed in 1979, equipped with a static bin vent filter, connected to Stack 58, filling capacity: 20.0 tons of sand per hour, 900 standard cubic feet per minute flow rate, used only for truck deliveries.
- (ll) Two (2) Shalco 315 core machines, known as EU 7-8, installed in 2001, equipped with an existing scrubber associated with the Laempe core machine, EU 7-4b for SO<sub>2</sub> control, exhausted in the core room, capacity: 5.0 tons of sand per hour, 140 pounds of epoxy resin per hour, and 75 pounds of SO<sub>2</sub> per hour, total.
- (mm) The core room raw material handling system is a pneumatic transfer system that delivers sand from EU 7-7 to feed bins for EU 7-4a, EU 7-4b, EU 7-5 and EU 7-8, capacity: 9.0 tons of sand per hour total, 150 standard cubic feet per minute of conveying air. The conveying air for EU 7-5 is discharged through EU 7-6. The conveying air for EU 7-4a, EU 7-4b and EU 7-8 is discharged indoors through individual static bin vents, equipped with cartridge filters. EU 7-6 and EU 7-7 are connected to each other by a vent tube so that the static vents in each function in parallel, equipped with cartridge filters.

**Combustion**

- (nn) Two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, installed in 1968, exhausted to Stack 88 and Stack 88A, respectively, rated at 16.4 million British thermal units per hour, each.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

## Emission Limitations and Standards [326 IAC 2-7-5(1)]

### D.6.1 PSD Minor Limits [326 IAC 2-2]

- (a) The SO<sub>2</sub> emissions from the two (2) Shalco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, permitted by SSM 141-12444, issued on October 16, 2000, shall not exceed a total of 9.13 pounds per hour, equivalent to less than forty (40) tons per twelve (12) consecutive month period and an overall minimum scrubber efficiency of 79.7%. Therefore, the requirements of 326 IAC 2-2 do not apply.
- (b) The particulate matter (PM) emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, shall not exceed a total of 5.02 pounds per hour, equivalent to 22.0 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.
- (c) The PM<sub>10</sub> emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, shall not exceed a total of 3.08 pounds per hour, equivalent to 13.5 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.
- (d) The total throughput of sand to sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, the sand silo - pepset/isoset, known as EU 7-7, and to EU 2-5, and EU 3-6 combined shall not exceed 15,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (1) PM emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, and the sand silo - pepset/isoset, known as EU 7-7, shall not exceed 0.27 pounds of PM per ton of sand.
- (2) PM<sub>10</sub> emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, and the sand silo - pepset/isoset, known as EU 7-7, shall not exceed 0.27 pounds of PM<sub>10</sub> per ton of sand.

Compliance with these limits renders the requirements of 326 IAC 2-2 not applicable.

### D.6.2 VOC [326 IAC 8-1-6] [326 IAC 2-2]

- (a) The VOC delivered to two (2) Shalco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, shall be limited to less than a total of twenty-five (25) tons of VOC per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit renders the requirements of 326 IAC 8-1-6 not applicable and also makes the requirements of 326 IAC 2-2 not applicable.
- (b) The VOC delivered to the iso-set core making process, consisting of four (4) Gaylord core machines, EU 7-4a shall be limited to less than a total of forty (40) tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit makes the requirements of 326 IAC 2-3 not applicable.

### D.6.3 Volatile Organic Compounds (VOCS) [326 IAC 2-2] [326 IAC 8-1-6]

- (a) The VOC delivered to the pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Compliance with this limit makes the requirements of 326 IAC 2-2 and 326 IAC 8-1-6 not applicable.

#### D.6.4 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) 0.03 grains per dry standard cubic foot of outlet air from the muller sand silo, known as EU 7-1, exhausted to Stack 11, equivalent to 0.231 pounds per hour at a flow rate of 900 dry standard cubic feet per minute.
- (b) 0.03 grains per dry standard cubic foot of outlet air from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, exhausted to Stack 58A, equivalent to 0.360 pounds per hour at a flow rate of 1,400 dry standard cubic feet per minute.
- (c) 0.03 grains per dry standard cubic foot of outlet air from the sand silo - pepset/isoset, known as EU 7-7, both exhausted to Stack 58, equivalent to 0.231 pounds per hour at a flow rate of 900 dry standard cubic feet per minute.
- (d) 0.03 grains per dry standard cubic foot of outlet air from the core room raw material handling system associated with the iso-set core-making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b, the pep-set core making process, known as EU 7-5, consisting of two (2) Palmer core machines, and the two (2) Shalco core machines, known as EU 7-8.
- (e) 0.01 grains per dry standard cubic foot of outlet air each from the two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, exhausted to Stack 88 and Stack 88A, respectively.

#### D.6.5 Natural Gas

In order to demonstrate compliance with Condition D.6.4(e), the two (2) boilers, known as EU 10-1 and EU 10-2, shall burn only natural gas.

#### D.6.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the muller sand silo, known as EU 7-1, the iso-set core-making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b, the pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines, the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, the sand silo - pepset/isoset, known as EU 7-7, and the two (2) Shalco core machines, known as EU 7-8, and their control devices.

### **Compliance Determination Requirements**

#### D.6.7 Particulate Matter (PM)

- (a) In order to comply with Condition D.6.4, the static bin vent filters for PM control shall be functional and control emissions from the muller sand silo, known as EU 7-1, the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, and the sand silo - pepset/isoset, known as EU 7-7, at all times that these processes are in operation.
- (b) In order to comply with Condition D.6.4, the bin vent cartridge filters for PM control shall be functional and control emissions from the core room raw material handling system at all times that the core room raw material handling system is in operation.

#### D.6.8 Sulfur Dioxide (SO<sub>2</sub>)

In order to comply with Condition D.6.1, the scrubbers for SO<sub>2</sub> control shall be in operation and control emissions from the (1) iso-set core-making process, consisting of four (4) Gaylord core

machines, known as EU 7-4a as well as the Laempe LL 30 core machine, known as EU 7-4b and two (2) Shalco core machines, known as EU 7-8, at all times that the core machines are in operation.

**D.6.9 Testing Requirements [326 IAC 2-7-6(1,6)] [326 IAC 2-1.1-11]**

Within 180 days after re-directing the scrubber exhaust to the outside atmosphere associated with Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines (EU 7-8), in order to demonstrate compliance with Condition D.6.1(a), the Permittee shall perform SO<sub>2</sub> testing of the emission rate and scrubber efficiency utilizing Method 6 (40 CFR 60, Appendix A) for SO<sub>2</sub>, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.6.10 Scrubber Parametric Monitoring**

The Permittee shall record the total static pressure drop across the scrubbers used in conjunction when any of the seven (7) core machines using the iso-set core-making process consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, at least once per shift when any of the core machines are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the scrubbers are outside the normal range of 2.0 and 8.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

**D.6.11 pH of the Scrubbing Liquor**

The Permittee shall record the pH of the scrubbing liquor used in conjunction with the iso-set process consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, at least once per shift when the core machines are in operation when venting to the atmosphere. When for any one reading, the pH of the scrubbing liquor is outside the normal range of 9.0 and 14.0, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pH reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pH shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

**D.6.12 Scrubber Flow Switches**

The Permittee shall equip the flow switches with an interlock mechanism that shuts down the emission unit(s) automatically when the scrubber flow is below the minimum specified by the manufacturer. The Permittee shall record whether or not the scrubber flow switches used in conjunction with the two (2) scrubbers controlling SO<sub>2</sub> emissions from the iso-set process, consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b

and the two (2) Shalco core machines, known as EU 7-8, are operating properly at least once per month. When for any one reading, the scrubber flow switch is not operating properly, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A nonoperating scrubber flow switch is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.6.13 Scrubber Inspection

An inspection shall be performed each calendar quarter of the scrubbers. Defective scrubber part(s) shall be replaced. Inspections required by this condition shall not be performed in consecutive months. A record shall be kept of the results of the inspection.

#### D.6.14 Failure Detection

In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C).

#### D.6.15 Visible Emissions Notations

- (a) Visible emission notations of the muller sand silo, known as EU 7-1, sand silo - Dept. 26 & 30, known as EU 7-6, sand silo - pepset/isoset, known as EU 7-7 Stack exhausts 11, 58A, and 58 and the individual bin vent filters associated with the conveying air for EU 7-4a, EU7-4b and EU 7-8 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.6.16 Record Keeping Requirements

- (a) To document compliance with Condition D.6.1(b), the Permittee shall maintain records of the total throughput of sand to the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, the sand silo - pepset/isoset, known as EU 7-7, as well as to EU 2-5 and EU 3-6 on a monthly basis.
- (b) To document compliance with Conditions D.6.2(a) and D.6.2(b), the Permittee shall maintain records of the amount of each resin and the VOC content of each resin in order to

determine the VOC delivered to the two (2) Shalco core machines, known as EU 7-8, the Laempe LL 30 core machine, known as EU 7-4b and the iso-set core-making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, on a monthly basis.

- (c) To document compliance with Condition D.6.3, the Permittee shall maintain records of the amount of each resin and the VOC content of each resin in order to determine the VOC delivered to the pep-set core making process, known as EU 7-5, consisting of two (2) Palmer core machines, on a monthly basis.
- (d) To document compliance with Condition D.6.11, the Permittee shall maintain the records of the pH of the scrubber liquor used in conjunction with the iso-set core making process consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines once per shift.
- (e) To document compliance with Condition D.6.12, the Permittee shall maintain the records of the status of the flow switches used in conjunction with two (2) scrubbers controlling SO<sub>2</sub> emissions from the iso-set core making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines once per month.
- (f) To document compliance with Condition D.6.13, the Permittee shall maintain records of the results of the inspections required under Condition D.6.13.
- (g) To document compliance with Condition D.6.15, the Permittee shall maintain records of visible emission notations of the Stack exhausts 11, 58A, and 58 and the individual bin vent filters associated with the conveying air for EU 7-4a, EU7-4b and EU 7-8 once per shift when operating normally, during daylight hours.
- (h) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.6.17 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.6.1(b), D.6.2(a) and D.6.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.7 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. (326 IAC 6-1)
- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. (326 IAC 6-1)
- (c) Other activities or categories not previously identified with emissions equal to or less than the insignificant thresholds of five (5) pounds per hour or twenty-five (25) pounds per day for PM, SO<sub>2</sub>, and/or NO<sub>x</sub>, three (3) pounds per hours or fifteen (15) pounds per day for VOC, twenty-five (25) pounds per day for CO or 0.6 tons per year or 3.29 pounds per day of lead:
  - (1) Powder coating, equipped with dry filters, capacity: 255 units per hour. (326 IAC 6-1)
  - (2) Holding furnace, known as Ajax. (326 IAC 6-1)
  - (3) Rod furnace. (326 IAC 6-1)
- (d) Asbestos abatement projects regulated by 326 IAC 14-10.
- (e) Natural gas-fired combustion source with heat input equal to or less than ten million (10,000,000) British thermal units per hour: One (1) burn-off oven with an integral afterburner, rated at 0.4 million British thermal units per hour. This burn-off oven is designed for removing excess coatings from paint line fixtures and parts to be coated and is not to be used for any other purpose. (326 IAC 4-2)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.7.1 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1, the particulate matter (PM) emissions from the brazing, cutting, soldering, welding, grinding, machining and powder coating operations as well as the holding and rod furnaces shall not exceed 0.03 grains per dry standard cubic foot of exhaust air.

#### D.7.2 Incinerator [326 IAC 4-2]

Pursuant to 326 IAC 4-2-2 (Incinerators: requirements), the one (1) natural gas fired burn-off oven shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Comply with 326 IAC 5-1 and 326 IAC 2;
- (c) Be maintained properly as specified by the manufacturer;
- (d) Be operated according to the manufacturer's recommendations;

- (e) Be operated so that emissions of noxious odors are prevented (not federally enforceable);
- (f) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air; and
- (g) Not create a nuisance or a fire hazard.

If any of the above result, the burning shall be terminated immediately.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.7.3 Particulate Matter (PM)**

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Pursuant to CP 141-5749-00007, issued July 17, 1996, the dry filters shall be in operation at all times when the powder coating is in operation.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

**PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
Part 70 Permit No.: T 141-6087-00007

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 Affidavit (specify) \_\_\_\_\_
- 9 Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
Part 70 Permit No.: T 141-6087-00007

**This form consists of 2 pages**

**Page 1 of 2**

**9** This is an emergency as defined in 326 IAC 2-7-1(12)  
CThe Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and  
CThe Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facilities: Three (3) Electric Induction Furnaces (EU 1-1)  
 Parameter: Gray and Ductile Iron Melted  
 Limit: 83,333 tons per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to 37.5 tons of PM per year.

YEAR: \_\_\_\_\_

Month	Gray and Ductile Iron Melted (tons)	Gray and Ductile Iron Melted (tons)	Gray and Ductile Iron Melted (tons)
	This Month	Previous 11 Months	12 Month Total

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facilities: Premix silo (EU 2-5), premix silo (EU 3-6), sand silo - Dept. 26 & 30 (South and Middle Foundries) (EU 7-6) and sand silo - pepset/isoset (EU 7-7)  
 Parameter: Sand Handled  
 Limit: Total of 15,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Sand Handled (tons)	Sand Handled (tons)	Sand Handled (tons)
	This Month	Previous 11 Months	12 Month Total

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facility: East Foundry Sand Handling Operation (EU 2-4)  
 Parameter: Sand Handled  
 Limit: Total 150,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to 2.70 tons of PM per year.

YEAR: \_\_\_\_\_

Month	Sand Handled (tons)	Sand Handled (tons)	Sand Handled (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facility: Shakeout Operation (EU 2-3)  
 Parameter: Castings  
 Limit: Total 25,000 tons of castings per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to 0.40 tons of PM per year.

YEAR: \_\_\_\_\_

Month	Castings (tons)	Castings (tons)	Castings (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facility: Shakeout Operation (EU 3-3)  
 Parameter: Iron Castings  
 Limit: Less than 66,666 tons per twelve (12) consecutive month period, equivalent to less than 40.0 tons of VOC per year.

YEAR: \_\_\_\_\_

Month	Iron Castings (tons)	Iron Castings (tons)	Iron Castings (tons)
	This Month	Previous 11 Months	12 Month Total

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facility: South Foundry Sand Handling Operation (EU 3-4)  
 Parameter: Sand Handled  
 Limit: 373,737 tons per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to 6.66 tons of PM per year.

YEAR: \_\_\_\_\_

Month	Sand Handled (tons)	Sand Handled (tons)	Sand Handled (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
Part 70 Permit No.: T 141-6087-00007  
Facilities: Sinto Molding, Pouring and Cooling, EU 4-2a and EU-4b  
Parameter: Metal Throughput  
Limit: Less than 19,240 tons of metal per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to less than a total of 27.0 tons of PM per year from pouring and less than a total of 13.25 tons of PM<sub>10</sub> per year.

YEAR: \_\_\_\_\_

Month	Metal Throughput (tons)		Metal Throughput (tons)		Metal Throughput (tons)	
	This Month EU 4-2a	This Month EU 4-2b	Previous 11 Months EU 4-2a	Previous 11 Months EU 4-2b	12 Month Total EU 4-2a	12 Month Total EU 4-2b

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facility: Foundry paint booth, known as EU 5-2  
 Parameter: Worst Case Single HAP Delivered to the Applicators  
 Limit: Less than ten (10) tons of a single HAP per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Single HAP (tons)	Single HAP (tons)	Single HAP (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facility: Foundry paint booth, known as EU 5-2  
 Parameter: Combination of HAPs Delivered to the Applicators  
 Limit: Less than twenty-five (25) tons of the combination of HAPs per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Combination of HAPs (tons)	Combination of HAPs (tons)	Combination of HAPs (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facilities: Laempe (EU 7-4b) and Two (2) Shalco Core Machines (EU 7-8)  
 Parameter: VOC Delivered to the Core Machines (VOC delivered is the sum of the product of the VOC content of each resin times the amount of that resin used)  
 Limit: Less than a total of twenty-five (25) tons of VOC per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: \_\_\_\_\_

Month	VOC Delivered (tons)	VOC Delivered (tons)	VOC Delivered (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facilities: Four (4) Gaylord Core Machines (EU 7-4a)  
 Parameter: VOC Delivered to the Core Machines (VOC delivered is the sum of the product of the VOC content of each resin times the amount of that resin used)  
 Limit: Less than a total of forty (40) tons of VOC per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: \_\_\_\_\_

Month	VOC Delivered (tons)	VOC Delivered (tons)	VOC Delivered (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facility: Pep-Set Core-Making Process (EU 7-5)  
 Parameter: VOC delivered to the applicators of the pep-set core making process (VOC delivered is the sum of the product of the VOC content of each resin times the amount of that resin used)  
 Limit: Less than twenty-five (25) tons of VOC per twelve (12) consecutive month period with compliance determined at the end of each month (VOC delivered is the product of the VOC content of each resin times the amount of that resin used)

YEAR: \_\_\_\_\_

Month	VOC Delivered (tons)	VOC Delivered (tons)	VOC Delivered (tons)
	This Month	Previous 11 Months	12 Month Total

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> specify permit condition #	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> specify permit condition #	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> specify permit condition #	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> specify permit condition #	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> specify permit condition #	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Part 70 Operating Permit

#### Source Background and Description

**Source Name:** RMG Foundry, LLC d/b/a RMG Foundry  
**Source Location:** 500 South Union Street, Mishawaka, Indiana 46544  
**County:** St. Joseph  
**SIC Code:** 3321  
**Operation Permit No.:** T 141-6087-00007  
**Permit Reviewer:** Mark L. Kramer

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from RMG Foundry, LLC d/b/a RMG Foundry, formerly Atchison Indiana, LLC d/b/a RMG Foundry, Dodge - Reliance Electrical Industrial Company and Rockwell Automation/Dodge Mishawaka Facility, relating to the operation of a gray and ductile iron foundry.

#### Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

##### **Melting Operations - Department 31**

- (a) Three (3) electric induction furnaces, known as EU 1-1 (also known as point 31P), installed in 1974, exhausted to Stack 47, capacity: 7.0 tons of gray or ductile iron per hour, each.
- (b) One (1) inoculation operation, known as EU 1-2, installed before 1974, released to the melting or foundry areas general building ventilation, capacity: 7.0 tons of molten iron per hour.
- (c) One (1) charge handling operation, known as EU 1-3, installed in 1974, released to the melting or foundry areas general building ventilation, capacity: 21.0 tons of iron and scrap per hour.
- (d) One (1) natural gas-fired scrap preheater, known as EU 1-4, installed in 1995, combustion exhausted to Stack 31, scrap preheating equipped with a baghouse, known as preheater B/H, for PM control and process exhausted to Stack 50, rated at 12.0 million British thermal units per hour, capacity: 21.0 tons of iron and scrap per hour.

##### **East Foundry Operations- Department 24**

- (e) One (1) large pinlift molding, pouring and cooling line, known as EU 2-1, installed in 1975, released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (f) One (1) small pinlift molding, pouring and cooling line, known as EU 2-2, installed in 1975, released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.

- (g) One (1) shakeout operation, known as EU 2-3, installed in 1975, equipped with a baghouse, known as East Foundry B/H, exhausted to Stack 49, capacity: 7.0 tons of iron castings per hour.
- (h) One (1) sand handling operation, known as EU 2-4 (also known as point 35P), installed in 1975, equipped with a baghouse, known as East Foundry B/H, exhausted to Stack 49, capacity: 50.0 tons of sand per hour.
- (i) One (1) premix silo, known as EU 2-5, equipped with a static bin vent filter, installed in 1979, connected to Stack 15, throughput capacity: 5.0 tons of premix per hour, storage capacity: 35 tons of premix.
- (j) One (1) new sand silo, known as EU 2-6, installed before 1974, equipped with a baghouse, known as East Foundry B/H, exhausted to Stack 49, filling capacity: 20.0 tons per hour of sand, storage capacity: 25.0 tons of sand.
- (k) One (1) floor molding, pouring and cooling line, known as EU 2-7, installed in 1895, released to the floor molding area general building ventilation, capacity: 1.0 ton of molten iron castings per hour.

#### **South Foundry Operations - Department 26**

- (l) One (1) pinlift molding, pouring and cooling line, known as EU 3-1, installed in 1959, released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (m) One (1) slinger molding, pouring and cooling line, known as EU 3-2, installed in 1959, released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (n) One (1) shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, installed prior to 1970 and in 1979, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44, capacity: 8.5 tons of iron castings per hour.
- (o) One (1) sand handling operation, known as EU 3-4 (also known as point 33P), installed in 1959, equipped with a baghouse, known as South Foundry - Sand System B/H, exhausted to Stack 51, capacity: 60.0 tons of sand per hour.
- (p) One (1) new sand bin/hopper, known as EU 3-5, installed in 1986, released to the general building ventilation, throughput capacity: 1.8 tons per hour of sand, storage capacity: 2.0 tons of sand.
- (q) One (1) premix silo, known as EU 3-6, installed in 1979, equipped with a static bin vent filter, connected to Stack 38, throughput capacity: 6.0 tons of premix per hour, storage capacity: 35 tons of premix.
- (r) One (1) North SPO molding, pouring and cooling line, known as EU 3-7, installed in 1959, released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (s) One (1) South SPO molding, pouring and cooling line, known as EU 3-8, installed in 1959, released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.

### **Middle Foundry Operations - Department 30**

- (t) One (1) Hunter molding, pouring and cooling line, known as EU 4-1, installed in 1992, with only the molding unit, replaced in December 2000, equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 7.5 tons of molten iron per hour.
- (u) One (1) Sinto molding, pouring and cooling line, known as the Small Sinto, EU 4-2a and EU 4-2b, both installed in 1974, replaced in 1998, pouring operations (EU 4-2a) released to the general building ventilation, cooling operations (EU 4-2b) equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 6.0 tons of molten iron per hour, each.
- (v) One (1) shakeout operation, known as EU 4-3, installed in 1951, equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 15.0 tons of iron casting per hour.
- (w) One (1) sand handling operation, known as EU 4-4, installed before 1974, equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 70.0 tons of sand per hour.
- (x) One (1) new sand feed hopper, known as EU 4-5, installed before 1974, released to the general building ventilation, throughput capacity: 2.1 tons of sand per hour, storage capacity: 2.0 tons of sand.
- (y) One (1) Sinto molding, pouring and cooling line, known as the Large Sinto, EU 4-7, equipped with a baghouse, known as Middle Foundry B/H, for PM control, exhausted to Stack 46, installed in 2001, capacity: 8.0 tons of molten iron per hour.

### **Cleaning and Finishing Operations - Department 29**

- (z) Three (3) mechanical blasters (wheel blast installed in 1971, rail blast installed in 1985 and #1 spinner hanger installed in 1970), known as EU 5-1 (also known as point 37P), equipped with a baghouse, known as Wheelabrator B/H, exhausted to Stack 43, capacity: 20.0 tons of shot per hour, total and 9.0 tons of metal per hour total.
- (aa) One (1) foundry paint booth, known as EU 5-2, equipped with airless assisted spray applicators, equipped with dry filters for overspray control, installed before 1968, exhausted to Stack 100, capacity: 5.0 gallons of paint per hour.
- (bb) One (1) grinding operation, known as EU 5-3 (also known as point 32P), installed before 1974, consisting of a small side grinding area with eleven (11) grinders, equipped with a central baghouse, known as grinding baghouse, exhausted to Stack 42, and a large side grinding area with eleven (11) grinding booths, booths 1 - 7, controlled by the grinding baghouse, booths 8 and 9, equipped with a cyclone, exhausted to Stack 16A, and booths 10 and 11, equipped with a Torit baghouse, exhausted to Stack 16, capacity: 13.65 tons of castings per hour.
- (cc) One (1) #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, installed in 1974 and replaced in 1991, equipped with a baghouse, known as #2 Spinner hanger B/H, exhausted to Stack 5, capacity: 2.0 tons of steel shot per hour and 4.5 tons of metal per hour.

- (dd) Two (2) Tumbblast mechanical blasters, known as EU 5-6, installed before 1968, equipped with a baghouse, known as Tumbblast B/H, exhausted to Stack 45, capacity: 2.0 tons per hour of steel shot, total and 4.5 tons of metal per hour.
- (ee) Miscellaneous solvent usage, known as EU 6-5, installed before 1968, released to the general building ventilation, capacity: 0.005 ton per hour of Stoddard solvent.

#### **Core Making Operations - Department 27**

- (ff) One (1) muller sand silo, known as EU 7-1, installed in prior to 1968, equipped with a static bin vent filter, connected to Stack 11, filling capacity: 20 tons of sand per hour, 900 standard cubic feet per minute flow rate, used only for truck deliveries.
- (gg) One (1) iso-set core-making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, installed in 1979, equipped with a counter current packed bed scrubber for SO<sub>2</sub> control, known as SO<sub>2</sub> scrubber, released to the general building ventilation, capacity: 4.5 tons of sand per hour, 126 pounds of iso-set resin per hour, and 67.5 pounds of SO<sub>2</sub> per hour.
- (hh) One (1) Laempe LL 30 core machine, known as EU 7-4b, installed in 2000, equipped with a scrubber for SO<sub>2</sub> control, known as the Laempe scrubber, capacity: 3.0 tons of sand per hour, 84 pounds of epoxy resin per hour, and 45 pounds of SO<sub>2</sub> per hour.
- (ii) One (1) pep-set core-making process, consisting of two (2) Palmer core machines, known as EU 7-5, installed in 1985, capacity: 13.0 tons of sand per hour, 313 pounds of pep-set per hour.
- (jj) One (1) sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, installed in 1979, equipped with a static bin vent filter, connected to Stack 58A, filling capacity: 20.0 tons of sand per hour, 900 standard cubic feet per minute flow rate, used only for truck deliveries.
- (kk) One (1) sand silo - pepset/isoset, known as EU 7-7, installed in 1979, equipped with a static bin vent filter, connected to Stack 58, filling capacity: 20.0 tons of sand per hour, 900 standard cubic feet per minute flow rate, used only for truck deliveries.
- (ll) Two (2) Shalco 315 core machines, known as EU 7-8, installed in 2001, equipped with an existing scrubber associated with the Laempe core machine, EU 7-4b for SO<sub>2</sub> control, exhausted in the core room, capacity: 5.0 tons of sand per hour, 140 pounds of epoxy resin per hour, and 75 pounds of SO<sub>2</sub> per hour, total.
- (mm) The core room raw material handling system is a pneumatic transfer system that delivers sand from EU 7-7 to feed bins for EU 7-4a, EU 7-4b, EU 7-5 and EU 7-8, capacity: 9.0 tons of sand per hour total, 150 standard cubic feet per minute of conveying air. The conveying air for EU 7-5 is discharged through EU 7-6. The conveying air for EU 7-4a, EU 7-4b and EU 7-8 is discharged indoors through individual static bin vents, equipped with cartridge filters. EU 7-6 and EU 7-7 are connected to each other by a vent tube so that the static vents in each function in parallel, equipped with cartridge filters.

#### **Combustion**

- (nn) Two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, installed in 1968, exhausted to Stack 88 and Stack 88A, respectively, rated at 16.4 million British

thermal units per hour, each.

### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

The permits issued by the St. Joseph Health Department focused on control devices only and therefore, all processes with controls were permitted. Those processes without controls installed prior to 1993 even though they were not indicated in the approvals are assumed to have been covered by the permitting intent of St. Joseph County Health Department.

### **New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval**

There are no new facilities proposed at this source during this review process.

### **Permitted Emission Units and Pollution Control Equipment Eliminated From Service**

The following permitted facilities previously operated at this source and have been abandoned and/or eliminated from service and are therefore, not included the proposed Part 70 Permit

- (a) The one (1) wire feed system for the inoculation of ductile iron in Department 26, permitted under CP 141-3867-00007, issued on September 20, 1994.
- (b) One (1) paint dip tank prime coat, permitted under D 1 132, issued January 6, 1993 and January 6, 1997, eliminated in 1997.
- (c) One (1) Binks paint spray booth, permitted under D 1 135, issued January 6, 1993 and January 6, 1997, eliminated in 1997.
- (d) One (1) paint dip tank (prime coat), permitted under D 1 137, issued January 6, 1993 and January 6, 1997, eliminated in 1993.
- (e) One (1) manual pulley blast booth, known as EU 12-1, installed in 1986, equipped with a baghouse for PM control, released to the general ventilation, capacity: 0.5 tons of steel shot per hour, removed from the foundry in 1999.
- (f) One (1) pulley cleaning operation, known as EU 12-2, installed in 1970, released to the general building ventilation, capacity: 0.0015 tons of solvent per hour, removed from the foundry in 1999.
- (g) One (1) pulley lagging application operation, known as EU 12-3, installed in 1986, equipped with hand rollers, released to the general building ventilation, capacity: 0.00075 tons of adhesive per hour, removed from the foundry in 1999.
- (h) One (1) natural gas-fired refuse incinerator, known as EU 11-1, rated at 1.9 million British thermal units per hour, capacity: 800 pounds of refuse per hour, limited to 750 tons of refuse per year, permitted under D 1 175, issued January 6, 1993 and January 6, 1997 removed from service in April 1999.
- (i) One (1) standby coal-fired boiler rated at 13 million British thermal units per hour.
- (j) One (1) shot blast cleaning machine for charge.

- (k) One (1) Squeezers molding, pouring and cooling line, known as EU 4-6, installed in 1959, released to the general building ventilation, capacity: 1.5 tons of molten iron per hour, removed by SSM 141-13749 in 2001.

#### **Department 11**

- (l) One (1) steel shop paint booth, known as EU 6-1, equipped with assisted airless spray applicators, equipped with dry filters for overspray control, installed before 1968, exhausted to Stack 4, capacity: 5.0 gallons of paint per hour.
- (m) One (1) 60 horsepower boiler rated at 2.511 million British thermal units per hour.
- (n) One (1) conveyor drive paint booth, known as EU 8-2, installed in 1970, equipped with air-assisted airless spray applicators, equipped with dry filters for overspray control, exhausted to Stack 99, capacity: 5.0 gallons of paint per hour.

#### **Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour (total 56.333 million British thermal units per hour):
  - (1) One (1) cure oven, rated at 3.5 million British thermal units per hour.
  - (2) One (1) washer, rated at 1.5 million British thermal units per hour.
  - (3) One (1) burn-off oven, rated at 0.4 million British thermal units per hour.
  - (4) One (1) dry-off oven, rated at 1.5 million British thermal units per hour.

#### **Department 10**

- (5) One (1) Door Blast Heater, rated at 0.5 million British thermal units per hour.

#### **Department 23/40**

- (6) One (1) gas unit heater rated at 0.250 million British thermal units per hour.
- (7) One (1) gas unit heater rated at 0.225 million British thermal units per hour.
- (8) One (1) radiant heater rated at 0.030 million British thermal units per hour.

#### **Department 24**

- (9) Two (2) ladle heaters rated at 0.115 million British thermal units per hour, each.
- (10) Ten (10) radiant gas heaters rated at 0.053 million British thermal units per hour, each.
- (11) One (1) air makeup unit rated at 5.000 million British thermal units per hour.

(12) One (1) air makeup unit rated at 6.000 million British thermal units per hour.

(13) One (1) ladle heater rated at 1.000 million British thermal units per hour.

**Department 26**

(14) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

(15) Four (4) ladle heaters rated at 0.500 million British thermal units per hour, each.

(16) Four (4) ladle heaters rated at 1.000 million British thermal units per hour, each.

(17) One (1) air makeup unit rated at 10.000 million British thermal units per hour.

**Department 27**

(18) One (1) gas radiant heater rated at 0.053 million British thermal units per hour.

(19) One (1) core oven rated at 0.270 million British thermal units per hour.

(20) One (1) shell core machine, Harrison 1616 rated at 0.145 million British thermal units per hour.

(21) Three (3) core machines, Shalco V-180 rated at 0.400 million British thermal units per hour, each.

(22) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

**Department 29**

(23) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

(24) One (1) gas radiant heater rated at 0.053 million British thermal units per hour

**Department 30**

(25) One (1) ladle heater rated at 0.115 million British thermal units per hour.

(26) Three (3) ladle heaters rated at 0.088 million British thermal units per hour, each.

(27) Two (2) ladle heaters rated at 0.500 million British thermal units per hour, each.

**Department 31**

(28) One (1) gas air makeup unit rated at 3.000 million British thermal units per hour.

(29) Three (3) ladle heaters rated at 1.000 million British thermal units per hour, each.

(30) One (1) ladle heater rated at 0.115 million British thermal units per hour.

(31) Five (5) gas radiant heaters rated at 0.053 million British thermal units per hour, each.

- (32) Two (2) gas unit heaters rated at 0.105 million British thermal units per hour, each.
- (33) One (1) gas unit heater rated at 0.260 million British thermal units per hour.
- (34) Two (2) Ajax torches.

**Department 39**

- (35) One (1) gas air makeup unit rated at 7.500 million British thermal units per hour.

**Foundry Locker Room**

- (36) One (1) gas unit heater rated at 0.250 million British thermal units per hour.
- (b) Propane for liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour.
- (c) Combustion source flame safety purging on startup.
- (d) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (e) The following VOC and HAP storage containers:
  - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
  - (2) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (f) Refractory storage not requiring air pollution control equipment.
- (g) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.
- (h) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (i) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (j) Cleaners and solvents characterized as follows:
  - (1) having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF) or;
  - (2) having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (k) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. (326 IAC 6-1)

- (l) Closed loop heating and cooling systems.
- (m) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (n) Noncontact cooling tower systems with either of the following: Forced and induced draft cooling tower system not regulated under a NESHAP.
- (o) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (p) Paved and unpaved roads and parking lots with public access.
- (q) Asbestos abatement projects regulated by 326 IAC 14-10.
- (r) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (s) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (t) On-site fire and emergency response training approved by the department.
- (u) Other emergency equipment as follows: Stationary fire pumps.
- (v) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. (326 IAC 6-1)
- (w) Purge double block and bleed valves.
- (x) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38EC).
- (y) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (z) Other activities or categories not previously identified with emissions equal to or less than the insignificant thresholds of five (5) pounds per hour or twenty-five (25) pounds per day for PM, SO<sub>2</sub>, and/or NO<sub>x</sub>, three (3) pounds per hours or fifteen (15) pounds per day for VOC, twenty-five (25) pounds per day for CO or 0.6 tons per year or 3.29 pounds per day of lead:
  - (1) Powder coating, equipped with dry filters, capacity: 255 units per hour. (326 IAC 6-1)
  - (2) Holding furnace, known as the Ajax. (326 IAC 6-1)
  - (3) Rod furnace. (326 IAC 6-1)

## Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

### St Joseph County

- (a) Registration No. D 1 123, issued January 6, 1993 and January 6, 1997.
- (b) Registration No. D 1 132, issued January 6, 1993 and January 6, 1997.
- (c) Registration No. D 1 135, issued January 6, 1993 and January 6, 1997.
- (d) Registration No. D 1 136, issued January 6, 1993 and January 6, 1997.
- (e) Registration No. D 1 137, issued January 6, 1993 and January 6, 1997.
- (f) Registration No. D 1 139A, issued January 6, 1993 and January 6, 1997.
- (g) Registration No. D 1 158, issued January 6, 1993 and January 6, 1997.
- (h) Registration No. D 1 160, issued January 6, 1993 and January 6, 1997.
- (i) Registration No. D 1 161, issued January 6, 1993 and January 6, 1997.
- (j) Registration No. D 1 162, issued January 6, 1993 and January 6, 1997.
- (k) Registration No. D 1 166, issued January 6, 1993 and January 6, 1997.
- (l) Registration No. D 1 171, issued January 6, 1995 and January 6, 1997.
- (m) Registration No. D 1 175, issued January 6, 1993 and January 6, 1997.
- (n) Registration No. D 1 176, issued January 6, 1993 and January 6, 1997.
- (o) Registration No. D 1 177, issued January 6, 1993 and January 6, 1997.
- (p) Registration No. D 1 188, issued January 6, 1993 and January 6, 1997.
- (q) Registration No. D 1 192, issued January 6, 1993 and January 6, 1997.

### IDEM, OAQ

- (r) Registration CP 141-2548-00007, issued May 22, 1992.
- (s) Registration CP 141-2503-00007, issued September 28, 1992.
- (t) Registration CP 141-3115-00007, issued November 2, 1993.
- (u) Registration CP 3867-00007, issued September 20, 1994.
- (v) CP 141-4053-00007, issued January 13, 1995.
- (w) Exemption 141-4507-00007, issued May 11, 1995.

- (x) CP 141-4010-00007, issued August 30, 1995.
- (y) Exemption CP 141-5749-00007, issued July 17, 1996.
- (z) AA 141-8532-00007, issued May 13, 1997.
- (aa) SSM 141-12444-00007, issued October 16, 2000.
- (bb) AA 141-12919-00007, issued December 1, 2000.
- (cc) SSM 141-13749-00007, issued March 23, 2001.
- (dd) SSM 141-14439-00007, issued September 12, 2001.

All conditions from previous IDEM, OAQ approvals were incorporated into this Part 70 permit except the following:

- (a) CP 141-3867, Plant ID 141-00007, issued September 20, 1994

Condition: One (1) wire feed system for inoculation of ductile iron in Department 026, capacity 2,262.5 pounds per hour, connected to cellulose cartridge dust collector, #6, total filter area 2,032 square feet, air to cloth ratio 1.47:1 acfm/cubic foot, pressure drop across baghouse 4 - 6 inches of water, pulse jet method of bag cleaning.

Pursuant to 326 IAC 6-3-2, particulate matter emissions shall be limited to 4.5 pounds per hour.

Reason not incorporated: The wire feed system for inoculation was removed from service.

- (b) CP 141-4010-00007, issued August 30, 1995

Condition No. 5 stated that pursuant to 326 IAC 2-1-3(i)8, the #2 Wheelabrator spinner hanger mechanical blaster (EU 5-4) shall conform to the following:

The particulate matter (PM) emissions shall not exceed 2.26 pounds per hour. Compliance with this condition will render 326 IAC 6-1-2 not applicable. Compliance with this condition shall also satisfy the conditions of 326 IAC 6-3-2. In addition, to satisfy compliance, the pressure drop across the baghouse shall remain within the range of 2 - 8 inches of water. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

Reason not incorporated: Since 326 IAC 6-3-2 is not applicable, this portion of the condition will not be included in the proposed permit because 326 IAC 6-1 is the applicable rule.

- (c) 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County)

Condition: 36P Standby Coal-fired boiler rated at 13 million British thermal units per hour limited to 3.39 tons of PM per year and 0.498 pounds of PM per million British thermal units.

Reason not incorporated: The coal-fired boiler was removed from service.

- (d) 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County)
- Condition: 38P Shot blast cleaning machine for charge limited to 3.44 tons of PM per year and 0.096 grains per dry standard cubic foot of exhaust air.
- Reason not incorporated: This shot blast cleaning operation was removed from service.
- (e) SSM 141-12444-00007, issued October 16, 2000 and SSM 141-14439-00007, issued September 12, 2001.
- Condition: Limited the throughput of sand to the iso-set core machine, known as EU 7-4b and two (2) Shalco core machines, known EU 7-8, to less than a total of 17,858 tons per twelve (12) consecutive month period coupled with a VOC emission factor not to exceed 2.80 pounds per ton of sand handled, equivalent to VOC emissions of less than twenty-five (25) tons per year in order to make the requirements of 326 IAC 8-1-6 not applicable.
- Reason not incorporated: This condition has been replaced by the limit on the amount and content of the resins delivered to the iso-set core machine, known as EU 7-4b and two (2) Shalco core machines, known EU 7-8.
- (f) 141-13749, issued March 23, 2001
- Condition D.1.2 required that PM emissions from the Sinto molding, pouring and cooling line, known as EU 4-7, shall not exceed 5.70 pounds per hour, and PM<sub>10</sub> emissions from the Sinto molding, pouring and cooling line, known as EU 4-7, shall not exceed 3.42 pounds per hour.
- Reason not incorporated: The grain loading limit of 0.03 grains per dry standard cubic foot of exhaust air pursuant to 326 IAC 6-1 coupled with a flow rate of 40,500 cubic feet per minute, equivalent to 10.4 pounds of PM per hour is more stringent than the sum of the hourly PM limits. Therefore, this limit also renders the requirements of 326 IAC 2-2 not applicable to each of the modifications (EU 4-1 modified in 2000, EU 4-2b modified in 1998, and EU 4-7 modified in 2001) exhausted to Stack 46.
- In addition, a grain loading of 0.025 grains per dry standard cubic foot of exhaust air coupled with a flow rate of 40,500 cubic feet per minute, equivalent to 8.67 pounds of PM<sub>10</sub> per hour renders the requirement of 326 IAC 2-2 not applicable for all modifications constructed after the PSD applicability date exhausting to the Middle Foundry baghouse, Stack 46.
- See details in State Rule Applicability - Individual Facilities section under 326 IAC 2-2 of this document.

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on June 6, 1996. Additional information was received on March 27, May 4, 21 and 24, 1998, February 3 and May 24, 1999 as well as April 3, 2000, September 5, 7 and 11, 2000, October 20 and 24, 2000, December 7, 2000, March 16, October 12, November 26 and December 10 and 21, 2001 as well as January 4, 2002.

A notice of completeness letter was mailed to the source on April 17, 1998.

### Emission Calculations

See pages 1 through 26 of 26 of Appendix A of this document for detailed emissions calculations of the significant emission units and insignificant activities using natural gas combustion.

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

<b>Pollutant</b>	<b>Potential To Emit (tons/year)</b>
PM	6,007
PM <sub>10</sub>	1,846
SO <sub>2</sub>	1,083
VOC	1,101
CO	52.2
NO <sub>x</sub>	60.9

Note: For the purpose of determining Title V applicability for particulates, PM<sub>10</sub>, not PM, is the regulated pollutant in consideration.

<b>HAPs</b>	<b>Potential To Emit (tons/year)</b>
Lead Compounds	9.20
Manganese Compounds	2.07
Isopropobenzene (Cumene)	15.1
Ethyl benzene	5.23

HAPs	Potential To Emit (tons/year)
Xylene	31.6
MIBK	10.5
Formaldehyde	0.033
Dichlorobenzene	0.0005
Hexane	0.797
Toluene	0.002
Cadmium Compounds	0.0005
Chromium Compounds	0.0006
Nickel Compounds	0.0009
Benzene	0.0009
All HAPS from Insignificant Activities, other than from natural gas combustion	5.00
<b>TOTAL</b>	<b>79.5</b>

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM<sub>10</sub>, SO<sub>2</sub> and VOC are equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPS is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions

Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

**Actual Emissions**

The following table shows the actual emissions from the source. This information reflects the 2000 IDEM, OAQ, emission data for the criteria pollutants and the actual HAPS emissions reported on the applicant supplied Form GSD-08 received February 3, 1999.

Pollutant	Actual Emissions (tons/year)
PM	53
PM <sub>10</sub>	53
SO <sub>2</sub>	0
VOC	48
CO	3
NO <sub>x</sub>	4
Lead	0.96
Manganese	0.51
Ethyl Benzene	0.79
Xylene	4.27
MIBK	1.31
MEK	0.54
Toluene	0.44

**Potential to Emit After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 Operating Permit.

Process/facility (installation date)	Limited Potential to Emit (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPS
<b>Department 31</b>							
EU 1-1 (1974)	37.5	79.1	0.000	0.000	0.000	0.000	11.3
EU 1-2 (1974)	55.2	55.2	0.000	0.153	0.000	0.000	0.000
EU 1-3 (1974)	36.8	33.1	0.000	0.000	0.000	0.000	0.000
EU 1-4 (Process) (1995)	14.9	0.366	0.000	0.000	0.000	0.000	0.000
<b>Combustion</b> EU 1-4 (1995), EU 10-1 (1968) & EU 10-2 (1968)	0.373	1.49	0.118	1.08	16.5	19.6	0.368

	Limited Potential to Emit (tons/year)						
Process/facility (installation date)	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPS
<b>Department 24</b>							
EU 2-1 (1975)	92.0	45.1	0.438	3.07	0.000	0.219	0.000
EU 2-2 (1975)	92.0	45.1	0.438	3.07	0.000	0.219	0.000
EU 2-3 (1975)	2.92	2.05	0.000	36.8	0.000	0.000	0.000
EU 2-4 (1975)	3.16	2.35	0.000	0.000	0.000	0.000	0.000
EU 2-5 (1979)	0.065	0.065	0.000	0.000	0.000	0.000	0.000
EU 2-6 (1974)	0.260	0.260	0.000	0.000	0.000	0.000	0.000
EU 2-7 (1895)	18.4	9.02	0.000	0.613	0.000	0.044	0.000
<b>Department 26</b>							
EU 3-1 (1959)	92.0	45.1	0.438	3.07	0.000	0.219	0.000
EU 3-2 (1959)	92.0	45.1	0.438	3.07	0.000	0.219	0.000
EU 3-3 (prior to 1970 & 1979)	5.17	2.49	0.000	40.0	0.000	0.000	0.000
EU 3-4 (1959)	6.66	2.82	0.000	0.000	0.000	0.000	0.000
EU 3-5 (1986)	0.158	0.079	0.000	0.000	0.000	0.000	0.000
EU 3-6 (1979)	0.260	0.260	0.000	0.000	0.000	0.000	0.000
EU 3-7 (1959)	92.0	45.1	0.438	3.07	0.000	0.219	0.000
EU 3-8 (1959)	92.0	45.1	0.438	3.07	0.000	0.219	0.000
<b>Department 30</b>							
EU 4-1 (1992) (partially replaced in 2000)	2.75	1.35	0.657	4.60	0.000	0.329	0.000
EU 4-2a (installed 1974, replaced 1998)	less than 37.4	18.3	0.526	3.68	0.00	0.263	0.000
EU 4-2b (installed 1974, replaced 1998)	less than 0.187	0.092	0.000	0.00	0.00	0.00	0.000
EU 4-3 (1951)	6.27	4.39	0.000	78.8	0.00	0.00	0.000
EU 4-4 (1974)	22.0	3.29	0.000	0.00	0.00	0.00	0.000
EU 4-5 (1974)	0.184	0.092	0.000	0.00	0.00	0.00	0.000
EU 4-7 (2001)	2.94	1.44	0.701	4.91	0.00	0.350	0.000

	Limited Potential to Emit (tons/year)						
Process/facility (installation date)	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPS
<b>Department 29</b>							
EU 5-1 (1970, 1971 & 1985)	5.50	0.268	0.000	0.000	0.000	0.000	0.000
EU 5-2 (1968)	0.697	0.697	0.00	75.5	0.00	0.00	47.3
EU 5-3 (prior to 1974)	5.50	5.69	0.00	0.00	0.00	0.00	0.00
EU 5-4 (installed 1974, replaced 1991)	2.82	0.134	0.00	0.00	0.00	0.00	0.00
EU 5-6 (1968)	1.34	0.134	0.00	0.00	0.00	0.00	0.00
<b>Department 11</b>							
EU 6-5 (1968)	0.00	0.00	0.00	43.8	0.00	0.00	0.00
<b>Department 27</b>							
EU 7-1 (1968)	0.260	0.260	0.00	0.00	0.00	0.00	0.00
EU 7-4a (1979)	0.029	0.029	0.198	less than 25	0.00	0.00	0.00
EU 7-4b (2000)	0.027	0.027	less than 40		0.00	0.00	5.65
EU 7-5 (1985)	0.000	0.000	0.00	less than 25	0.00	0.00	0.00
EU 7-6 (1979)	0.377	0.377	0.00	0.00	0.00	0.00	0.00
EU 7-7 (1979)	0.260	0.260	0.00	0.00	0.00	0.00	0.00
EU 7-8 (2001)	less than 22.0	less than 13.5	Combined with EU 7-4b limit	Combined with EU 7-4a & EU 7-4b limit	0.00	0.00	3.84
<b>Department 11</b>							
Insignificant Activities: Natural Gas Combustion	0.469	1.88	0.148	1.36	20.7	24.7	0.463

Process/facility (installation date)	Limited Potential to Emit (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPS
Insignificant Activities: EU 5-8, EU 6-2, EU 6-3, EU 7-2, EU 7-3, EU 7-6, EU 8-1 & EU 9-1	25.7	20.7	5.60	0.100	0.000	8.80	0.00
Insignificant Activities (other)	12.0	12.0	0.5	11.0	15.0	5.00	5.00
Total Emissions	less than 884	less than 546	less than 51.2	less than 371	52.2	60.9	73.9

- (a) The South Foundry shakeout operations, EU 3-3, consists of two (2) shakeout units. The first was constructed prior to 1970 and the second was constructed in 1979 with identical capacities. The potential to emit VOC after controls for each shakeout unit is 22.35 tons per year. Therefore, the addition of the second unit in 1979 is not subject to the requirements of 326 IAC 2-2 since the potential to emit after controls is less than forty (40) tons of VOC per year.
- (b) A throughput limit has been accepted by the source of 26,683 tons of metal per twelve (12) consecutive month period, equivalent to PM and PM<sub>10</sub> emissions of less than 37.4 tons per year and 18.3 tons per year for EU 4-2a accounting for netting credit for the removal of the existing Osborne line. The 26,683 tons of metal per twelve (12) consecutive month period is equivalent to PM and PM<sub>10</sub> emissions of less than 0.187 tons per year and 0.092 tons per year for EU 4-2b. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.
- (c) Pursuant to Source Modification 141-14439, issued September 12, 2001,
- (1) The SO<sub>2</sub> emissions from the two (2) Shalco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, permitted by SSM 141-12444, issued on October 16, 2000, shall not exceed a total of 9.13 pounds per hour, equivalent to less than forty (40) tons per year and an overall minimum scrubber efficiency of 79.7%. Therefore, the requirements of 326 IAC 2-2 do not apply.
  - (2) The particulate matter (PM) emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shellco core machines, known as EU 7-8, shall not exceed a total of 5.02 pounds per hour, equivalent to 22.0 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.
  - (3) The PM<sub>10</sub> emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, shall not exceed a total of 3.08 pounds per hour, equivalent to 13.5 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.

- (d) The amount of resins delivered to two (2) Shalco core machines, known as EU 7-8, the Laempe core machine, known as EU 7-4b, and the four (4) Gaylord core machines, known as EU 7-4a, shall be limited to less than a total of 250 tons per twelve (12) consecutive month period, and shall not exceed a VOC content of 200 pounds of VOC per ton of resin.

This total resin usage limit combined with the VOC content limit of the resins is equivalent to less than a total of twenty-five (25) tons of VOC per year. Compliance with these limits renders the requirements of 326 IAC 8-1-6 not applicable. Compliance with these limits also makes the requirements of 326 IAC 2-2 not applicable.

- (e) The Middle Foundry baghouse Stack 46 with an exhaust flow rate of 40,500 cubic feet per minute has a PM and PM<sub>10</sub> grain loading limits of 0.03 and 0.025 grains per dry standard cubic foot of outlet air to comply with 326 IAC 6-1 and to render the requirement of 326 IAC 2-2 not applicable for the modifications of EU 4-1, EU 4-2b and EU 4-7.

### County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) Fugitive Emissions

Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

### Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

#### **Federal Rule Applicability**

- (a) The Part 70 application for this foundry was submitted in June 1996, therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable.
- (b) The two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, installed in 1968, rated at 16.4 million British thermal units per hour, each, are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.4), Subpart Dc, since these boilers were installed prior to the June 9, 1989 applicability date for this rule.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63) applicable to this source. The degreaser is not subject to 40 CFR 63, Subpart T since it does not use any halogenated solvents.

#### **State Rule Applicability - Entire Source**

##### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source is an existing major source under PSD because it is one of the twenty eight (28) listed sources and the potential PM, PM<sub>10</sub> and VOC emissions after control exceed one hundred (100) tons per year. The source has not undergone PSD review for any of the existing equipment. All future modifications to this source will be subject to the PSD significant threshold levels.

##### 326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC in St. Joseph County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

##### 326 IAC 5-1 (Opacity Emissions Limitations)

Since the source is located north of Kern Road and East of Pine Road in St. Joseph County, pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR Part 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### **State Rule Applicability - Individual Facilities**

#### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The following emission units by department were constructed prior to the August 8, 1977, PSD applicability date:

- (a) Melting Operations - Department 31
  - (1) Three (3) electric induction furnaces, known as EU 1-1 (also known as point 31P), installed in 1974.
  - (2) One (1) inoculation operation, known as EU 1-2, installed before 1974.
  - (3) One (1) charge handling operation, known as EU 1-3, installed 1974.
- (b) East Foundry Operations- Department 24
  - (4) One (1) large pinlift molding, pouring and cooling line, known as EU 2-1, installed in 1975.
  - (5) One (1) small pinlift molding, pouring and cooling line, known as EU 2-2, installed in 1975.
  - (6) One (1) shakeout operation, known as EU 2-3, installed in 1975.
  - (7) One (1) sand handling operation, known as EU 2-4 (also known as point 35P), installed in 1975.
  - (8) One (1) new sand silo, known as EU 2-6, installed before 1974.
  - (9) One (1) floor molding, pouring and cooling line, known as EU 2-7, installed in 1895.
- (c) South Foundry Operations - Department 26
  - (10) One (1) pinlift molding, pouring and cooling line, known as EU 3-1, installed in 1959.
  - (11) One (1) slinger molding, pouring and cooling line, known as EU 3-2, installed in 1959.
  - (12) One (1) shakeout operation, known as EU 3-3 (also known as point 34P), only one (1) of two (2) shakeout units, installed prior to 1970.
  - (13) One (1) sand handling operation, known as EU 3-4 (also known as point 33P), installed in 1959.
  - (14) One (1) North SPO molding, pouring and cooling line, known as EU 3-7, installed in 1959.
  - (15) One (1) South SPO molding, pouring and cooling line, known as EU 3-8, installed in 1959.

- (d) Middle Foundry Operations - Department 30
  - (16) One (1) shakeout operation, known as EU 4-3, installed in 1951.
  - (17) One (1) sand handling operation, known as EU 4-4, installed before 1974.
  - (18) One (1) new sand feed hopper, known as EU 4-5, installed before 1974.
- (e) Cleaning and Finishing Operations - Department 29
  - (20) Two (2) mechanical blasters (wheel blast and #1 spinner hanger), known as EU 5-1 (also known as point 37P), installed in 1971 and 1970, respectively.
  - (21) One (1) foundry paint booth, known as EU 5-2, installed before 1968.
  - (22) One (1) grinding operation, known as EU 5-3 (also known as point 32P), installed before 1974.
  - (23) Two (2) tumblast mechanical blasters, known as EU 5-6, installed before 1968.
- (f) Conveyor Drive Fabrication Operations - Department 11
  - (24) Miscellaneous solvent usage, known as EU 6-5, installed before 1968.
- (g) Core Making Operations - Department 27
  - (25) One (1) muller sand silo, known as EU 7-1, installed in prior to 1968.
- (h) Combustion
  - (26) Two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, installed in 1968.

The following limits are necessary to render the requirements of 326 IAC 2-2 not applicable:

- (a) Pursuant to CP 141-4010, issued on August 30, 1995, the particulate matter emissions from the #2 spinner hanger B/H (EU 5-4 exhausting to Stack 5) shall not exceed 2.26 pounds per hour. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.
  - (1) This 2.26 pounds of PM per hour limit does not assure compliance with 326 IAC 6-1 which requires a 0.03 grain loading, equivalent to 0.643 pounds of PM per hour at an exhaust flow rate of 2,500 dry standard cubic feet per minute.
  - (2) In addition, to assure compliance with the PM<sub>10</sub> PSD significant level of fifteen (15) tons per year, the PM<sub>10</sub> emissions from the #2 spinner hanger B/H (EU 5-4 exhausting to Stack 5) shall not exceed 3.42 pounds per hour.
- (b) Pursuant to SSM 141-12444, issued March 23, 2001, the outlet exhaust of the scrubber for EU 7-4b shall not exceed an SO<sub>2</sub> emission rate of 9.13 pounds per hour, equivalent to less than forty (40) tons per year. This 9.13 pound per hour SO<sub>2</sub> emission rate requires an overall minimum control efficiency greater than seventy-nine and seven tenths percent (79.7%). Therefore, the requirements of 326 IAC 2-2 are not applicable.

- (c) The potential VOC emissions from pep-set core making process (EU 7-5), consisting of two (2) Palmer core machines, constructed in 1985 exceed forty (40) tons per year and thus 326 IAC 2-2 could be applicable. The source has agreed to limit the VOC usage from EU 7-5 to less than twenty-five (25) tons per year. Compliance with the following limits will make the requirements of 326 IAC 8-1-6 and 326 IAC 2-2 not applicable to EU 7-5.
- (1) The amount of resins delivered to pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines shall be limited by the following equation, such that the total VOC delivered to the pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines is less than twenty-five (25) tons per twelve (12) consecutive month period.
- Less than 25 tons of VOC per year = Less than  $0.490 * \text{Amount of Resin \#1 (tons/yr)} + 0.390 * \text{Amount of Resin \#2 (tons/yr)} + 0.750 * \text{Amount of Resin \#3 (tons/yr)}$
- (2) The VOC content of the three (3) resins shall not exceed the following:
- (A) 980 pounds per ton of resin #1,
- (B) 780 pounds per ton of resin #2, and
- (C) 1,500 pounds per ton of resin #3.
- (d) The potential PM and PM<sub>10</sub> emissions from the rail blast mechanical blaster exhausted to Stack 43 constructed in 1985 exceed 25 and 15 tons per year, respectively and thus 326 IAC 2-2 could be applicable. The source has agreed to limit the PM and PM<sub>10</sub> emissions from the rail blast to less than 5.70 and 3.42 pounds per hour, respectively. Compliance with these PM and PM<sub>10</sub> limits makes the requirements of 326 IAC 2-2 not applicable.
- Since the two (2) other mechanical blasters of EU 5-1 are connected to Stack 43, compliance with 326 IAC 6-1-18 for Stack 43 which requires that PM emissions of 0.015 grains per dry standard cubic foot and 5.5 tons per year of PM as specified in St. Joseph County Permit D 1 177 and pursuant to 326 IAC 6-1-18 assures compliance with PM and PM<sub>10</sub> emission limits to render the requirements of 326 IAC 2-2 not applicable.
- (e) On December 13, 2000, IDEM received a request to replace the molding unit of the Hunter molding, pouring and cooling line, known as EU 4-1, installed in 1992.
- (1) The installation started, as planned, on December 23, 2000, as stated in the letter of December 7, 2000 and the new unit began operation on January 4, 2001.
- This was an in-kind replacement, there was no change in the capacity of the Hunter line. In the case of the RMG Foundry, the bottleneck is in the melting capacity. There is only 21 tons per hour of melting capacity and 43 tons per hour of molding, pouring, and cooling capacity. There can be no net increase in production capacity at the RMG Foundry unless there is an increase in melting capacity.
- (2) Mold making processes in foundries do not have any emissions listed in the FIRE database or in AP-42. This is logical because at the molding unit the sand has already been mixed with binders and is dustless. VOC from the binders, if present, is only emitted during the pouring, cooling and shakeout processes which was not replaced. Therefore during the mold making process, there are no VOC emissions. Therefore, there are no previous emissions and no potential emissions from the

molding unit.

(3) In order to render the requirements of 326 IAC 2-2, an overall grain loading limit for PM and PM<sub>10</sub> has been specified below for the Middle Foundry baghouse.

(f) The Sinto molding, pouring and cooling line, known as EU 4-2a and EU 4-2b, was installed in 1998 as a replacement for the Osborne line installed in 1974. The Osborne manufacturer had gone out of business, so replacement parts were no longer available, and an Osborne replacement was also not available. The capacity of the Sinto and Osborne lines was identical at six (6) tons of metal per hour. Since a like kind replacement was not constructed, the source has agreed to limit the metal throughput to 26,683 tons per twelve (12) consecutive month period.

In order to render the requirements of 326 IAC 2-2 not applicable, the throughput limit for EU 4-2a and EU 4-2b has been calculated so that the potential to emit plus credit for actual emissions from the removal of the Osborne Line is equivalent to total PM and PM<sub>10</sub> emissions of less than twenty-five (25) and fifteen (15) tons per year, respectively.

The only actual emission data available for the Osborne Line was from 1997. In 1997 the throughput was 5,973 tons of iron. The throughput limit for PM was controlling and the throughput limit was determined as follows: The credit for netting of 5,973 tons of iron for 1997 is equivalent total PM emissions based on an emission factor of 4.2 pounds per tons of metal of 12.54 tons of PM per year. Therefore, the limited throughput is equivalent to 25 +12.54 tons of PM per year or 37.5 tons per year. The throughput limit was calculated reflecting the two (2) emission factors of 2.8 pounds of PM per tons of metal and 1.4 pounds per ton of metal for the Sinto EU 4-2a and EU 4-2b, respectively acknowledging that EU 4-2b has a 99% control efficiency. Note the PM<sub>10</sub> emission factors are 1.37 pounds per ton of metal for EU 4-2a and 0.690 pounds per ton for EU 4-2b.

The 26,683 tons of metal per twelve (12) consecutive month period is equivalent to PM and PM<sub>10</sub> emissions of less than 37.4 tons per year and 18.3 tons per year for EU 4-2a. The 26,683 tons of metal per twelve (12) consecutive month period is equivalent to PM and PM<sub>10</sub> emissions of less than 0.187 tons per year and 0.092 tons per year for EU 4-2b.

In addition, in order to render the requirements of 326 IAC 2-2, an overall grain loading limit for PM and PM10 has been specified below for the Middle Foundry baghouse.

(g) The amount of resins delivered to two (2) Shalco core machines, known as EU 7-8 the Laempe core machine, known as EU 7-4b, and the iso-set core-making process, consisting of four (4) Gaylord core machines, known as EU 7-4a shall be limited to less than a total of 250 tons per twelve (12) consecutive month period, and shall not exceed a VOC content of 200 pounds of VOC per ton of resin.

This total resin usage limit combined with the VOC content limit of the resins is equivalent to less than a total of twenty-five (25) tons of VOC per year. Compliance with these limits renders the requirements of 326 IAC 8-1-6 not applicable. Compliance with these limits also makes the requirements of 326 IAC 2-2 not applicable.

(h) The source modifications in 1979 involving EU 2-5, EU 3-3, EU 3-6, EU 7-6, and EU 7-7 were not subject to the requirements of 326 IAC 2-2 since the total potential to emit after controls of PM and PM<sub>10</sub> of 6.13 and 3.45 tons per year, respectively, were less than the significant levels of twenty-five (25) tons per year for PM and fifteen (15) tons per year for PM<sub>10</sub>.

Therefore in order to render the requirements of 326 IAC 2-2 which require that the potential to emit is less than the PM and PM<sub>10</sub> significant levels of twenty-five (25) tons per year and fifteen (15) tons per year, respectively, not applicable to these modifications, the flow rates associated with each stack have been used to proportion the PSD significant levels as follows:

EU #	Flow Rate (acfm)	Limited PM Emission Rate		Limited PM <sub>10</sub> Emission Rate	
		tons per year	pounds per hour	tons per year	pounds per hour
2-5	900	0.735	0.167	0.441	0.100
3-3	27,000	22.0	5.03	13.2	3.02
3-6	900	0.735	0.167	0.441	0.100
7-6	900	0.735	0.167	0.441	0.100
7-7	900	0.735	0.167	0.441	0.100
Total	30,600	less than 25		less than 15	

The limited PM and PM<sub>10</sub> limits are as follows:

- (1) The PM emissions from the premix silo, known as EU 2-5, equipped with a static bin vent filter, connected to Stack 15 shall not exceed 0.167 pounds per hour.
- (2) The PM<sub>10</sub> emissions from the premix silo, known as EU 2-5, equipped with a static bin vent filter, connected to Stack 15 shall not exceed 0.100 pounds per hour.
- (3) The PM emissions from the shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44 shall not exceed 5.03 pounds per hour.
- (4) The PM<sub>10</sub> emissions from the shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44 shall not exceed 3.02 pounds per hour.
- (5) The PM emissions from the premix silo, known as EU 3-6, equipped with a static bin vent filter, connected to Stack 38, shall not exceed 0.167 pounds per hour.
- (6) The PM<sub>10</sub> emissions from the premix silo, known as EU 3-6, equipped with a static bin vent filter, connected to Stack 38, shall not exceed 0.100 pounds per hour.
- (7) The PM emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, equipped with a static bin vent filter, connected to Stack 58A, shall not exceed 0.167 pounds per hour.

- (8) The PM<sub>10</sub> emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, equipped with a static bin vent filter, connected to Stack 58A, shall not exceed 0.100 pounds per hour.
- (9) The PM emissions from the sand silo - pepset/isoset, known as EU 7-7, installed in 1979, equipped with a static bin vent filter, connected to Stack 58, shall not exceed 0.167 pounds per hour.
- (10) The PM<sub>10</sub> emissions from the sand silo - pepset/isoset, known as EU 7-7, installed in 1979, equipped with a static bin vent filter, connected to Stack 58, shall not exceed 0.100 pounds per hour.

Calculations indicate that in each of these emission units complies with the aforementioned PM and PM<sub>10</sub> emission limits as shown in Appendix A.

(i) Middle Foundry Baghouse Stack 46

(1) Particulate Matter (PM)

Several emission units (EU 4-1, EU 4-2b and EU 4-7) are associated with the Middle Foundry baghouse, exhausted to Stack 46, and have had modifications which the source has agreed to limit PM and PM<sub>10</sub> emissions to render the requirements of 326 IAC 2-2 not applicable. In addition, EU 4-3 and EU 4-4 are also serviced by the Middle Foundry baghouse and exhaust to Stack 46. These emission units predate the applicability of 326 IAC 2-2 and do not have any emission limits other than complying with 326 IAC 6-1. Furthermore, EU 4-2a is exhausted to the general ventilation as well as EU 4-5, which was constructed before the applicability date of 326 IAC 2-2.

The following table lists the allowable PM emission rates for each of the emission units exhausting to Stack 46 that have undergone modification since the PSD applicability date of August 7, 1977. Also shown is the PSD significant level for PM and its equivalent in pounds per hour. Note that the modification of EU 4-2a and EU 4-2b involved netting and EU 4-2a and EU 4-2b have a throughput limit equivalent to a total of less than 37.5 tons of PM per year and 18.4 tons of PM<sub>10</sub> per year.

EU # (Year of the Modification)	PM PSD Significant Level (tons/yr)	Equivalent PM (lbs/hr)
4-1 (2000)	less than 25	less than 5.70
4-2b (1998)	limited to less than 0.187	less than 0.043
4-7 (2001)	less than 25	less than 5.70
Total	less 50.2	less than 11.5

Therefore the sum of the allowable PM PSD significant levels for just two (2) of the modifications (EU 4-1 and EU 4-7), exhausting through the Middle Foundry baghouse Stack 46 is less than fifty (50) tons per year, equivalent to less than 11.4 pounds per hour. This sum of 11.4 pounds per hour exceeds the allowable PM emission rate of 10.4 pounds per hour based on 0.03 grains per dry standard foot

of outlet air at a flow rate of 40,500 cubic feet per minute pursuant to 326 IAC 6-1. Thus, compliance with 326 IAC 6-1 also assures compliance with 326 IAC 2-2 for all three (3) modifications.

(2) PM<sub>10</sub>

The following table lists the allowable PM<sub>10</sub> emission rates for each of the emission units exhausting to Stack 46. The sum of the equivalent PSD significant levels for EU 4-1 and EU 4-7, plus the equivalent limited emission rate for EU 4-2b and the controlled potential to emit for EU 4-3 and EU 4-4 is 8.67 pounds of PM<sub>10</sub> per hour. At an exhaust flow rate of 40,500 cubic feet per minute for Stack 46, 8.67 pounds of PM<sub>10</sub> per hour is equivalent to 0.025 grains per dry standard cubic foot of outlet air. Thus compliance with this grain loading and the throughput limit for EU 4-2b will assure compliance with 326 IAC 2-2 for all three (3) modifications.

EU # Exhausted to Middle Foundry Baghouse Stack 46	PM <sub>10</sub> PSD Significant Level (tons/yr)	Equivalent PM <sub>10</sub> or Potential After Controls (lbs/hr)
4-1 (2000)	less than 15	less than 3.42
4-2b (1998)	limited to less than 0.1	less than 0.0824
4-3 (1951)	not applicable	1.00
4-4 (1974)	not applicable	0.752
4-7 (2001)	less than 15	less than 3.42
Total		less than 8.67

326 IAC 2-3 (Emission Offset)

- (a) Pursuant to CP 141-4053-00007, issued on January 13, 1995 and 326 IAC 2-3, the particulate matter emissions from the preheater baghouse, (EU 1-4) shall not exceed 5.70 pounds per hour. This limit will render the requirements of this rule not applicable.

Pursuant to CP 141-4053-00007, issued on January 13, 1995 and 326 IAC 2-3, the PM<sub>10</sub> emissions from the preheater baghouse, (EU 1-4) shall not exceed 3.42 pounds per hour. This limit will render the requirements of this rule not applicable.

- (b) The South Foundry shakeout operations, EU 3-3, consists of two (2) shakeout units. The first was constructed prior to 1970 and the second was constructed in 1979 with identical capacities. The potential to emit VOC for each shakeout unit is 22.35 tons per year. Therefore, the addition of the second unit in 1979 is not subject to the requirements of 326 IAC 2-3 since the potential to emit is less than forty (40) tons of VOC per year.

The throughput of iron castings to the shakeout operation, known as EU 3-3, shall be limited to less than 66,666 tons per twelve (12) consecutive month period coupled with a VOC emission factor not to exceed 1.20 pounds per ton of casting, equivalent to VOC emissions of less than forty (40.0) tons per year in order to make the requirements of 326 IAC 2-3 not applicable.

326 IAC 2-7-5(13) (Preventive Maintenance Plan)

- (a) A Preventive Maintenance Plan is required for emission units EU 4-1, 4-2b, 4-3, 4-4 and 4-7 because:
  - (1) They have control devices, and
  - (2) The allowable PM, SO<sub>2</sub> or VOC emissions exceed ten (10) pounds per hour.
- (b) A Preventive Maintenance Plan is required for emission units EU 1-1, 1-4, 2-4, 3-3, 3-4, 5-1, 5-3, 5-4, 7-4a, 7-4b, 7-5 and 7-8 because the emission unit would have been subject to an applicable requirement if there was not a condition limiting the potential to emit.
- (c) A Preventive Maintenance Plan is required for emission unit EU 5-2 because the emission unit is a surface coating facility and has a control device which is needed to comply with 326 IAC 6-1-2.
- (d) A Preventive Maintenance Plan is required for emission units EU 2-3, 2-5, 3-6, 5-6, 7-1, 7-6 and 7-7 because each emission unit requires a control device to comply with 326 IAC 6-1.
- (e) A Preventive Maintenance Plan is not required for emission unit EU 2-6 even though it has a control device because:
  - (1) The allowable PM, SO<sub>2</sub> or VOC emissions do not exceed ten (10) pounds per hour,
  - (2) The control device is not required to comply with 326 IAC 6-1 since the potential PM emissions before control are less than 0.03 grains per dry standard cubic foot of exhaust air, and
  - (3) There is no NSPS or NESHAP that applies.
- (f) A Preventive Maintenance Plan is not required for emissions units EU 1-2, 1-3, 2-1, 2-2, 2-7, 3-1, 3-2, 3-5, 3-7, 3-8, 4-2a, 4-5, and 6-5 because the emission units do not have controls and actual emissions do not exceed twenty-five (25) tons per year.
- (g) A Preventive Maintenance Plan is not required for emissions units EU 10-1 and 10-2 because:
  - (1) The emission units do not have controls and actual emissions do not exceed twenty-five (25) tons per year, and
  - (2) There is no NSPS or NESHAP that applies.

326 IAC 6-1 (Nonattainment area limitations)

Since St. Joseph County is listed in this rule and the potential PM emissions from this source are greater than one hundred (100) tons per year, those facilities not specifically listed in 326 IAC 6-1-18 are subject to a PM emission rate not to exceed either 0.01 or 0.03 grains per dry standard cubic foot. The following emission units, not specifically listed in 326 IAC 6-1-18 are each limited to 0.03 grains per dry standard cubic foot, except the two (2) boilers which are limited to 0.01 grains per dry standard cubic foot.

(a) Stack Exhausts

(1) Stack 50 - Preheater (EU 1-4)

Pursuant to CP 141-4053, issued January 13, 1995 and 326 IAC 6-1, particulate matter emissions from the baghouse for the charge preheater (EU 1-4) shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 1-4 are 4.20 pounds per hour. The controlled captured PM emissions from EU 1-4 are 0.042 pounds per hour.

The flow rate from the Stack 50 is 4,000 dry standard cubic feet per minute which is equivalent to:

$$0.042 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 4,000 \text{ dscfm} = 0.001 \text{ gr/dscf}$$

Therefore, the preheater complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The baghouse shall be in operation at all times EU 1-4 is in operation to comply with this rule.

(2) Stack 15 - Premix Silo (EU 2-5)

Pursuant to 326 IAC 6-1, particulate matter emissions from the Stack 15 shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 2-5 are 1.35 pounds per hour. The controlled captured PM emissions from EU 2-5 are 0.0135 pounds per hour.

The flow rate from the Stack 15 is 900 dry standard cubic feet per minute which is equivalent to:

$$0.0135 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 900 \text{ dscfm} = 0.002 \text{ gr/dscf}$$

Therefore, EU 2-5 complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The bin vent filter shall be in operation at all times the Premix Silo is in operation to comply with this rule.

(3) Stack 38 - Premix Silo (EU 3-6)

Pursuant to 326 IAC 6-1, particulate matter emissions from the Stack 38 shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 3-6 are 5.40 pounds per hour. The controlled captured PM emissions from EU 3-6 are 0.054 pounds per hour.

The flow rate from the Stack 38 is 900 dry standard cubic feet per minute which is equivalent to:

$$0.054 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 900 \text{ dscfm} = 0.007 \text{ gr/dscf}$$

Therefore, EU 3-6 complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The bin vent filter shall be in operation at all times the Premix Silo is in operation to comply with this rule.

- (4) Stack 46 - One (1) Hunter molding, pouring and cooling line (EU 4-1), one (1) Sinto cooling line (EU 4-2b), one (1) shakeout operation (EU 4-3), one (1) sand handling operation (EU 4-4) and one (1) Sinto molding, pouring and cooling line (EU 4-7).

Pursuant to 326 IAC 6-1, particulate matter emissions from the Stack 46 shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 4-1, EU 4-2b, EU 4-3, EU 4-4 and EU 4-7 are 31.5, 8.40, 48.0, 252 and 33.6 pounds per hour, respectively. The controlled captured PM emissions from EU 4-1, EU 4-2b, EU 4-3, EU 4-4 and EU 4-7 are 0.3119, 0.0832, 0.4704, 2.4948 and 0.672 pounds per hour, respectively, for a total of 4.032 pounds per hour.

The flow rate from the Stack 46 is 40,500 dry standard cubic feet per minute which is equivalent to:

$$4.032 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 40,500 \text{ dscfm} = 0.012 \text{ gr/dscf}$$

Therefore, the EU 4-1, EU 4-2b, EU 4-3, EU 4-4 and EU 4-7 comply with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The baghouse for EU 4-1, EU 4-3, EU 4-4 and EU 4-7 shall be in operation at all times any of these emission units are in operation to comply with this rule.

- (5) Stack 100 - Foundry paint booth (EU 5-2)

Pursuant to 326 IAC 6-1, particulate matter emissions from the Stack 100 shall not exceed 0.03 grains per dry standard cubic foot. The dry filters shall be in operation at all times the foundry paint booth is in operation to comply with this rule.

- (6) Stack 5 - One (1) #2 Wheelabrator spinner hanger mechanical blaster (EU 5-4)

- (A) Pursuant to 326 IAC 6-1, particulate matter emissions from the Stack 5 shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 5-4 are 69.8 pounds per hour. The controlled captured PM emissions from EU 5-4 are 0.279 pounds per hour.

The flow rate from the Stack 5 is 2,500 dry standard cubic feet per minute which is equivalent to:

$$0.279 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 2,500 \text{ dscfm} = 0.013 \text{ gr/dscf}$$

Therefore, EU 5-4 complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The baghouse shall be in operation at all times the #2 Wheelabrator spinner hanger mechanical blaster is in operation to comply with this rule.

- (B) Pursuant to CP 141-4010-00007, issued August 30, 1995, Condition No. 5 stated that pursuant to 326 IAC 2-1-3(i)8, the #2 Wheelabrator spinner hanger mechanical blaster (EU 5-4) shall conform to the following:

The particulate matter (PM) emissions shall not exceed 2.26 pounds per hour. Compliance with this condition will render 326 IAC 6-1-2 not applicable. Compliance with this condition shall also satisfy

the conditions of 326 IAC 6-3-2. In addition, to satisfy compliance, the pressure drop across the baghouse shall remain within the range of 2 - 8 inches of water. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

Since 326 IAC 6-3-2 is not applicable, this portion of the condition will not be included in the proposed permit because 326 IAC 6-1 is the applicable rule.

Since EU 5-4 has a total potential PM emission rate of 0.124 pounds per hour, the #2 Wheelabrator spinner hanger mechanical blaster complies with this limit of 2.26 pounds per hour.

(7) Stack 45 - Two (2) tumblasts mechanical blasters (EU 5-6)

Pursuant to 326 IAC 6-1, particulate matter emissions from the Stack 45 shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 5-6 are 76.5 pounds per hour. The controlled captured PM emissions from EU 5-6 are 0.306 pounds per hour.

The flow rate from the Stack 45 is 10,000 dry standard cubic feet per minute which is equivalent to:

$$0.306 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 10,000 \text{ dscfm} = 0.004 \text{ gr/dscf}$$

Therefore, EU 5-6 complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The baghouse shall be in operation at all times when either of the two (2) tumblasts mechanical blasters are in operation to comply with this rule.

(8) Stack 11 - Muller sand silo (EU 7-1)

Pursuant to 326 IAC 6-1, particulate matter emissions from the Stack 11 shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 7-1 are 5.40 pounds per hour. The controlled captured PM emissions from EU 7-1 are 0.054 pounds per hour.

The flow rate from the Stack 11 is 900 dry standard cubic feet per minute which is equivalent to:

$$0.054 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 900 \text{ dscfm} = 0.007 \text{ gr/dscf}$$

Therefore, EU 7-1 complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The bin vent filter shall be in operation at all times the muller sand silo is in operation to comply with this rule.

(9) The static bin vent with cartridge filters exhaust to general ventilation - Core Room Raw Material Handling System associated with iso-set core machine (EU 7-4a)

Pursuant to 326 IAC 6-1, particulate matter emissions from the cartridge exhaust shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 7-4a are 1.22 pounds per hour. The controlled captured PM emissions from EU 7-4a are 0.0134 pounds per hour.

The flow rate from the exhaust is 900 dry standard cubic feet per minute which is equivalent to:

$$0.0134 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 900 \text{ dscfm} = 0.002 \text{ gr/dscf}$$

Therefore, EU 7-4a complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The bin vent filter shall be functional at all times the Core Room Raw Material Handling System associated with iso-set core machine is in operation to comply with this rule.

- (10) The static bin vent with cartridge filters exhaust to general ventilation - Core Room Raw Material Handling System associated with Laempe LL 30 core machine (EU 7-4b) and the two (2) Shellco core machines.

Pursuant to 326 IAC 6-1, particulate matter emissions from the baghouse exhaust shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 7-4b and EU 7-8 are 0.810 and 1.35 pounds per hour, respectively. The controlled captured PM emissions from EU 7-4b and EU 7-8 are 0.0089 and 0.015 pounds per hour.

The flow rate from the exhaust is 3,000 dry standard cubic feet per minute which is equivalent to:

$$(0.0089 + 0.015) \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 3,000 \text{ dscfm} = 0.001 \text{ gr/dscf}$$

Therefore, EU 7-4b and EU 7-8 comply with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The static bin vent with cartridge filters shall be functional at all times the Core Room Raw Material Handling System associated with Laempe LL 30 core machine and two (2) Shellco core machines are in operation to comply with this rule.

- (11) Stack 58A - Sand silo - Department 26 & 30 (EU 7-6)

Pursuant to 326 IAC 6-1, particulate matter emissions from the Stack 58A shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 7-6 are 7.83 pounds per hour. The controlled captured PM emissions from EU 7-6 are 0.078 pounds per hour.

The flow rate from the Stack 58A is 1,400 dry standard cubic feet per minute which is equivalent to:

$$0.078 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 1,400 \text{ dscfm} = 0.007 \text{ gr/dscf}$$

Therefore, EU 7-6 complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The bin vent filter shall be in operation at all times the sand silo is in operation to comply with this rule.

(12) Stack 58 - Sand silo - pepset/isoset (EU 7-7)

Pursuant to 326 IAC 6-1, particulate matter emissions from the Stack 58 shall not exceed 0.03 grains per dry standard cubic foot.

The potential PM emissions from EU 7-7 are 5.40 pounds per hour. The controlled captured PM emissions from EU 7-7 are 0.054 pounds per hour.

The flow rate from the Stack 58 is 900 dry standard cubic feet per minute which is equivalent to:

$$0.054 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 900 \text{ dscfm} = 0.007 \text{ gr/dscf}$$

Therefore, EU 7-7 complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule. The bin vent filter shall be in operation at all times the sand silo - pepset/isoset is in operation to comply with this rule.

(13) Pursuant to 326 IAC 6-1-2(b)(5), the two (2) natural gas-fired boiler (EU 10-1 and EU 10-2) exhausted through Stacks 88 and 88A shall be limited to a particulate matter emission rate of no more than 0.01 grains per dry standard cubic foot of exhaust air, each.

The flow rate from the Stacks 88 and 88A are 3,500 dry standard cubic feet per minute which is equivalent to:

$$0.031 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 3,500 \text{ dscfm} = 0.001 \text{ gr/dscf, each}$$

Therefore, EU 10-1 and EU 10-2 comply with the 0.01 grains per dry standard cubic foot of exhaust air limit of this rule.

(b) General Ventilation

Since multiple processes are vented to general ventilation and the uncaptured PM emissions from certain processes also are released through general ventilation, the following sections show that all general ventilation exhausts comply with 326 IAC 6-1 limit of 0.03 grains per dry standard cubic foot of exhaust air.

(1) Melting Area General Ventilation

The uncaptured PM emissions not exhausted through Stack 47 from the three (3) induction furnaces (EU 1-1) and not exhausted through Stack 50 for the scrap preheater (EU 1-4) and the uncaptured PM emissions from the one (1) inoculation operation (EU 1-2) and the charge handling operation (EU 1-3) comprise most of the PM emissions in the melting area released to the general building ventilation. The potential uncaptured PM emissions from EU 1-2 and EU 1-3 are 12.6 and 8.40 pounds per hour, respectively. Best engineering judgment is that five percent (5%) of the potential PM emissions of 18.9 pounds per hour from EU 1-1 are not exhausted to Stack 47 and therefore the uncaptured PM emissions from EU 1-1 are 0.945 pounds per hour. Similarly, with one (1%) of the potential PM emissions of 4.2 pounds per hour or 0.042 pounds per hour are not exhausted to Stack 50. Therefore a total of 22.0 pounds of PM per hour are released through general ventilation.

The flow rate from the general ventilation fans in the melt area is 104,000 dry standard cubic feet per minute which is equivalent to:

$$22.0 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 104,000 \text{ dscfm} = 0.02 \text{ gr/dscf}$$

Therefore, the melt area general ventilation complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule.

Note that if the largest fan is not operating, the air flow will be reduced from 104,000 to 84,000 dry standard cubic feet per minute, resulting in a grain loading of:

$$22.0 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 84,000 \text{ dscfm} = 0.03 \text{ gr/dscf}$$

Therefore, the melt area general ventilation complies with the 0.03 grains per dry standard cubic foot of exhaust air limit of this rule.

(2) East Foundry General Ventilation - Main Molding Area

The east foundry has a maximum capacity of 7 tons of metal melted per hour and thus the individual pouring and cooling can not total more than 7 tons per hour. The uncaptured PM emissions not exhausted through stacks from one (1) shakeout operation (EU 2-3), one (1) sand handling operation (EU 2-4) and one (1) new sand silo (EU 2-6), and the PM emissions from the one (1) inoculation operation (EU 1-2), the one (1) large pinlift molding, pouring and cooling line (EU 2-1) and one (1) small pinlift molding, pouring and cooling line (EU 2-2) comprise the PM emissions in the east foundry main molding area released to the general building ventilation. The potential uncaptured PM emissions from EU 2-3, EU 2-4 and EU 2-6 are, 0.448, 1.80, and 0.0054 pounds per hour, respectively. Best engineering judgment yields a potential emission rate for the uncaptured PM emissions from EU 1-2, EU 2-1 and EU 2-2 of 12.6, 14.7 and 14.7 pounds per hour, respectively, released in the east foundry main molding area general building ventilation for a total of 44.3 pounds per hour.

The flow rate from the general ventilation fans in the east foundry main molding area is 213,000 dry standard cubic feet per minute which is equivalent to:

$$44.3 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 213,000 \text{ dscfm} = 0.02 \text{ gr/dscf}$$

Therefore, the east foundry main molding area complies with this rule.

Note that if the largest fan is not operating, the air flow will be reduced from 213,000 to 178,000 dry standard cubic feet per minute, resulting in a grain loading of:

$$44.3 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 178,000 \text{ dscfm} = 0.03 \text{ gr/dscf}$$

Therefore, the east foundry main molding area general ventilation complies with this rule.

(3) East Foundry General Ventilation - Auxiliary Cooling Area

The east foundry has a maximum capacity of 7 tons of metal melted per hour and thus the individual cooling can not total more than 7 tons per hour. The uncaptured PM emissions from the one (1) large pinlift cooling portion of EU 2-1 and one (1) small pinlift cooling portion of EU 2-2 comprise the PM emissions in the east foundry

auxiliary cooling area released to the general building ventilation. The potential PM emissions from EU 2-1 and EU 2-2 are 4.90 pounds per hour, each released in the east foundry auxiliary cooling area general building ventilation.

The flow rate from the general ventilation fans in the auxiliary cooling area of the east foundry is 50,000 dry standard cubic feet per minute which is equivalent to:

$$9.80 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 50,000 \text{ dscfm} = 0.02 \text{ gr/dscf}$$

Therefore, the east foundry auxiliary cooling area general ventilation complies with this rule.

(4) East Foundry General Ventilation - Floor Molding Area

The uncaptured PM emissions from the one (1) floor molding, pouring and cooling operation (EU 2-7) comprise the PM emissions from the east foundry floor molding area released to the general building ventilation. The potential PM emissions from EU 2-7 are 4.20 pounds per hour.

The flow rate from the general ventilation fans in the east foundry floor molding area is 27,000 dry standard cubic feet per minute which is equivalent to:

$$4.20 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 27,000 \text{ dscfm} = 0.02 \text{ gr/dscf}$$

Therefore, the floor molding, pouring and cooling general ventilation complies with this rule.

(5) South Foundry General Ventilation

The south foundry has a maximum capacity of 8.5 tons of metal melted per hour and thus the individual pouring and cooling can not total more than 8.5 tons per hour. The uncaptured PM emissions from the one (1) inoculation operation (EU 1-2), one (1) pinlift molding, pouring and cooling line (EU 3-1), one (1) slinger molding, pouring and cooling line (EU 3-2), one (1) North SPO molding, pouring and cooling line (EU 3-7), one (1) South SPO molding, pouring and cooling line (EU 3-8), one (1) shakeout operation (EU 3-3), one (1) sand handling operation (EU 3-4), and one (1) new sand bin (EU 3-5) comprise the PM emissions in the south foundry area released to the general building ventilation. Best engineering judgment yields a potential emission rate for the uncaptured PM emissions from EU 1-2, EU 3-1, EU 3-2, EU 3-3, EU 3-4, EU 3-5, EU 3-7, and EU 3-8 of 12.6, 8.93, 8.93, 0.544, 2.16, 0.0200, 8.93, and 8.93 pounds per hour for a total 51.0 pounds per hour, respectively, released to the south foundry general building ventilation.

The flow rate from the general ventilation fans in the south foundry is 217,000 dry standard cubic feet per minute which is equivalent to:

$$51.00 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 217,000 \text{ dscfm} = 0.03 \text{ gr/dscf}$$

Therefore, the south foundry general ventilation complies with this rule.

Note that if the largest fan is not operating, the air flow will be reduced from 217,000 to 189,500 dry standard cubic feet per minute, resulting in a grain loading of:

$$51.00 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 189,500 \text{ dscfm} = 0.03 \text{ gr/dscf}$$

Therefore, the south foundry general ventilation complies with this rule.

(6) Middle Foundry General Ventilation

The uncaptured PM emissions from the one (1) inoculation operation (EU 1-2), one (1) Hunter molding, pouring and cooling operation (EU 4-1), one (1) Sinto molding and pouring operation (EU 4-2a), one (1) Sinto cooling operation (EU 4-2b), one (1) shakeout operation (EU 4-3), one (1) sand handling operation (EU 4-4), and one (1) new sand hopper (EU 4-5) comprise the PM emissions in the middle foundry area released to the general building ventilation. The potential PM emissions from EU 1-2, EU 4-1, EU 4-2a, EU 4-2b, EU 4-3, EU 4-4, and EU 4-5 are shown on pages 1 and 11 through 14 of 23 of Appendix A and are 12.6, 31.5, 16.8, 8.40, 48.0, 252 and 0.0420, pounds per hour, respectively. Best engineering judgment yields a potential emission rate for the uncaptured PM emissions from EU 1-2, EU 4-1, EU 4-2a, EU 4-2b, EU 4-3, EU 4-4, and EU 4-5 of 12.6, 0.315, 16.8, 0.0840, 0.960, 2.52 and 0.0054 pounds per hour, respectively, released to the middle foundry general building ventilation or a total of 33.3 pounds per hour.

The flow rate from the general ventilation fans in the middle foundry is 175,500 dry standard cubic feet per minute which is equivalent to:

$$33.3 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 175,500 \text{ dscfm} = 0.022 \text{ gr/dscf}$$

Note that if the largest fan is not operating, the air flow will be reduced from 175,500 to 155,500 dry standard cubic feet per minute, resulting in a grain loading of:

$$33.3 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 155,500 \text{ dscfm} = 0.025 \text{ gr/dscf}$$

Therefore, the middle foundry general ventilation complies with this rule.

326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County)

Those facilities specifically listed in 326 IAC 6-1-18 under the name of Reliance Electric - Dodge Division are subject to individual PM emission rates. The following emission units, specifically listed in 326 IAC 6-1-18 are limited as follows:

Point	Emission Unit	PM Emission Limit (tons/year)	PM Emission Limit (lbs/mmBtu)	PM Emission Limit (grains/dscf)
31P	Three (3) electric induction furnaces EU 1-1	37.5	-	0.090
32P	Manual Grinding EU 5-3	5.5	-	0.001
33Ps	Sand Handling EU 3-4	6.66	-	0.017
34P	Sand Handling Shakeout EU 3-3	5.17	-	0.012
35P	Sand Handling General EU 2-4	3.16	-	0.010

Point	Emission Unit	PM Emission Limit (tons/year)	PM Emission Limit (lbs/mmBtu)	PM Emission Limit (grains/dscf)
36P*	Standby Coal-Fired Boiler 13 mmBtu/hr	3.39	0.498	-
37P	Shot Blast Cleaning EU 5-1	5.5	-	0.015
38P*	Shot Blast Cleaning	3.44	-	0.096

\* Note that 36P and 38P are no longer present at the foundry. However, EU 1-4 performs a similar function as the shot blast. Historically, a shot blast machine which was removed, was used to clean the charge. The plant replaced the shot blast machine with a preheater which was installed pursuant to CP 141-4053.

(a) Three (3) Electric Induction Furnaces (EU 1-1)

The three (3) electric induction furnaces, known as EU 1-1, exhausted to Stack 47 (also known as point 31P), are limited to emissions of 0.09 grains per dry standard cubic foot and 37.5 tons per year of PM as specified in St. Joseph County Permit D 1 177 and pursuant to 326 IAC 6-1-18.

The flow rate for EU 1-1 is 25,000 dry standard cubic feet per minute which is equivalent to:

$$18.9 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 25,000 \text{ dscfm} = 0.09 \text{ gr/dscf}$$

Therefore, the three (3) electric induction furnaces comply with this rule.

Limited PM emissions of 37.5 tons per year are equivalent to a melt throughput limit of 83,333 tons of gray and ductile iron per consecutive twelve (12) month period.

(b) Sand Handling General (EU 2-4)

(1) The General sand handling is only the one (1) sand handling operation, known as EU 2-4, exhausted to Stack 49 (also known as point 35P), and are limited to emissions of 0.010 grains per dry standard cubic foot and 3.16 tons per year of PM as specified in St. Joseph County Permit D 1 177 and pursuant to 326 IAC 6-1-18. Since Stack 49 exhausts emissions from the one (1) shake out operation, known as EU 2-3, one (1) sand handling operation, known as EU 2-4, and one (1) new sand silo, known as EU 2-6, the total potential emissions are examined to show compliance with 326 IAC 6-1-18. The potential PM emissions from EU 2-3, EU 2-4, and EU 2-6 are 22.4, 180, and 5.40 pounds per hour, respectively. The controlled captured PM emissions from EU 2-3, EU 2-4, and EU 2-6 exhausted through Stack 49 are 0.2195, 1.782, and 0.0539 pounds per hour, respectively for a total of 2.0555 pounds per hour.

The flow rate for Stack 49 is 33,000 dry standard cubic feet per minute which is equivalent to:

$$2.0555 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 33,000 \text{ dscfm} = 0.007 \text{ gr/dscf}$$

In order to comply with the 3.16 tons per year PM limit pursuant to 326 IAC 6-1-18, the throughput of sand to EU 2-4 shall not exceed 177,329 tons of sand per twelve (12) consecutive month period. See page 4 of 26 of TSD Appendix A for calculation.

Therefore, the PM emissions exhausted through Stack 49 from the sand handling comply with this rule after controls.

- (2) Pursuant to CP 141-3115-00007, issued November 2, 1993, the condition that stated that the sand preparation baghouse must comply with 326 IAC 6-1-18 which allows a maximum grain discharge of 0.01 grains per dry standard cubic feet. At a flow rate of 27,500 cubic feet per minute, this is equivalent to 10.3 tons per year of particulate matter. The equivalency has been superceded since the flow rate is now 33,000 cubic feet per minute and the annual limit is 3.16 tons per year pursuant to 326 IAC 6-1-18.

- (c) The one (1) shake out operation, known as EU 3-3, exhausted to Stack 44 (also known as point 34P), is limited to emissions of 0.012 grains per dry standard cubic foot and 5.17 tons per year of PM as specified in St. Joseph County Permit D 1 177 and pursuant to 326 IAC 6-1-18. The potential PM emissions from EU 3-3 is 27.2 pounds per hour. The controlled captured PM emissions from EU 3-3 is 0.2666 pounds per hour.

The flow rate for stack 44 is 27,000 dry standard cubic feet per minute which is equivalent to:

$$0.2666 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 27,000 \text{ dscfm} = 0.001 \text{ gr/dscf}$$

Therefore, the PM emissions exhausted through Stack 44 from the shake out operation comply with this rule after controls.

- (d) The one (1) sand handling operation, known as EU 3-4, exhausted to Stack 51 (also known as point 33P), is limited to emissions of 0.017 grains per dry standard cubic foot and 6.66 tons per year of PM as specified in St. Joseph County Permit D 1 177 and pursuant to 326 IAC 6-1-18. The potential PM emissions from EU 3-4 are 216 pounds per hour. The controlled captured PM emissions from EU 3-4 is 2.1384 pounds per hour.

The flow rate for Stack 51 is 27,500 dry standard cubic feet per minute which is equivalent to:

$$2.1384 \text{ lbs/hr} * 7,000 \text{ gr/1 lb} * 1 \text{ hr/60 min} / 27,500 \text{ dscfm} = 0.009 \text{ gr/dscf}$$

In order to comply with the 6.66 tons per year PM limit pursuant to 326 IAC 6-1-18, the throughput of sand to EU 3-4 shall not exceed 373,737 tons of sand per twelve (12) consecutive month period. See page 8 of 26 of TSD Appendix A for calculation.

Therefore, the PM emissions exhausted through Stack 51 from the one (1) sand handling operation, known as EU 3-4 comply with this rule after controls.

- (e) Three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger)

- (1) The three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, exhausted to Stack 43 (also known as point 37P), are limited to emissions of 0.015 grains per dry standard cubic foot and 5.5 tons per year of PM as specified in St. Joseph County Permit D 1 177 and pursuant to 326 IAC 6-1-18. The potential PM emissions from EU 5-1 are 140 pounds per hour. The controlled

captured PM emissions from EU 5-1 are 0.558 pounds per hour.

The flow rate for Stack 43 is 18,500 dry standard cubic feet per minute which is equivalent to:

$$0.558 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 18,500 \text{ dscfm} = 0.004 \text{ gr/dscf}$$

Therefore, the PM emissions exhausted through Stack 43 from the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1 comply with this rule after controls since the grain loading of 0.004 is less than 0.015 grains per dry standard cubic foot per minute.

The potential uncontrolled PM emissions from the operation are 611 tons per year x 0.999 captured x (1 - 0.997 control) = 2.44 tons per year which is less than the 5.5 tons of PM per year limit pursuant to 326 IAC 6-1-18. Therefore, since the maximum capacity does not require a throughput limit at the stated capture and control efficiencies of 99.9% and 99.7%, respectively, no throughput limit is required. However, a minimum control efficiency of 99.1% has been specified to assure compliance with the 5.5 tons per year limit. See page 15 of 26 of Appendix A for the calculation.

- (2) Pursuant to Registration No. D 1 162, issued January 6, 1993 and 326 IAC 6, PM emissions shall not exceed 11.40 pounds per hour and 5.5 tons per year from the Wheelabator shot blast machines and dust collector (Department 29 - shot blast machines).

This condition is superceded by the applicability of 326 IAC 6-1 and 326 IAC 6-1-18.

- (f) The one (1) grinding operation, known as EU 5-3, exhausted to Stack 42 (also known as point 32P), is limited to emissions of 0.001 grains per dry standard cubic foot and 5.5 tons per year of PM as specified in St. Joseph County Permit D 1 177 and pursuant to 326 IAC 6-1-18. The potential PM emissions from EU 5-3 are 21.8 pounds per hour. The controlled captured PM emissions from all of EU 5-3 are 0.2075 pounds per hour, including those from Stacks 16 and 16A.

The flow rate for Stack 42 is 27,000 dry standard cubic feet per minute which is equivalent to:

$$0.2075 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr/60 min} / 27,000 \text{ dscfm} = 0.001 \text{ gr/dscf}$$

Therefore, the PM emissions exhausted through Stack 42 from the one (1) grinding operation, known as EU 5-3 comply with this rule after controls since the grain loading is 0.001 grains per dry standard cubic foot.

The potential uncontrolled PM emissions from the grinding operation are 95.7 tons per year x 0.95 captured x (1 - 0.99 control) = 0.909 tons per year which is less than the 5.5 tons of PM per year limit pursuant to 326 IAC 6-1-18. Therefore, since the maximum capacity does not require a throughput limit at the stated capture and control efficiencies of 95% and 99%, respectively, no throughput limit is required. However, a minimum control efficiency of 94% has been specified to assure compliance with the 5.5 tons per year limit. See page 15 of 26 of Appendix A for the calculation.

Stacks 16 with a flow rate of 3,000 dry standard cubic feet per minute and 16A with a flow rate of 1,500 dry standard cubic feet per minute also associated with the grinding operation (EU 5-3) shall be limited to 0.03 grains per dry standard cubic foot of exhaust air.

Stack 16  $0.2075 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr}/60 \text{ min} / 3,000 \text{ dscfm} = 0.008 \text{ gr/dscf}$

Stack 16A  $0.2075 \text{ lbs/hr} * 7,000 \text{ gr/lb} * 1 \text{ hr}/60 \text{ min} / 1,500 \text{ dscfm} = 0.016 \text{ gr/dscf}$

Therefore, assuming all PM emissions were exhausted through either Stack 16 or Stack 16A shows compliance with a 0.03 grain loading limit.

For Stack 16, 0.03 grains per dry standard cubic foot of exhaust air is equivalent to

$0.03 \text{ gr/dscf} / 7,000 \text{ gr} * 1 \text{ lb} / 1 \text{ hr} * 60 \text{ min} * 3,000 \text{ dscfm} = 0.771 \text{ lbs/hr}$

For Stack 16A, 0.03 grains per dry standard cubic foot of exhaust air is equivalent to

$0.03 \text{ gr/dscf} / 7,000 \text{ gr} * 1 \text{ lb} / 1 \text{ hr} * 60 \text{ min} * 1,500 \text{ dscfm} = 0.386 \text{ lbs/hr}$

Pursuant to Registration No. D 1 160, issued January 6, 1993 and 326 IAC 6, PM emissions shall not exceed 13.60 pounds per hour and 1.1 tons per year from the Wheelabator grinding operation and dust collector (Department 29 - grinding operation).

This condition is superceded by the applicability of 326 IAC 6-1 and 326 IAC 6-1-18.

#### 326 IAC 8-1-6 (New facilities: general reduction requirements)

- (a) Since the potential to emit VOC from the two (2) Shalco core machines, known as EU 7-8 and the Laempe core machine, known as EU 7-4b, exceed twenty-five (25) tons per year, the requirements of 326 IAC 8-1-6 could be applicable. The source has agreed to limit the amount of resins delivered to two (2) Shalco core machines, known as EU 7-8 and the Laempe core machine, known as EU 7-4b, to less than a total of 250 tons per twelve (12) consecutive month period, and not exceed a VOC content of 200 pounds of VOC per ton of resin.

This total resin usage limit combined with the VOC content limit of the resins is equivalent to less than a total of twenty-five (25) tons of VOC per year. Compliance with these limits renders the requirements of 326 IAC 8-1-6 not applicable. Compliance with these limits also makes the requirements of 326 IAC 2-2 not applicable.

- (b) When the iso-set core making process, consisting of four (4) Gaylord core machines, EU 7-4a, was installed in 1979, St. Joseph County was the permitting authority. It was their practice to permit only control devices and boilers. No permit or operating restrictions were applied to this emission unit. The current owner has no records covering the permitting of this emission unit. Therefore, RMG Foundry agrees that 326 IAC 2-2 could be applicable to this emission unit constructed after 1978 and agrees to have this emission unit's VOC emissions incorporated into the VOC emission limit of twenty-five (25) tons per year for EU 7-8 and EU 7-4b. Therefore the requirements of 326 IAC 2-2 are not applicable.
- (c) The potential VOC emissions from pep-set core making process (EU 7-5), consisting of two (2) Palmer core machines, constructed in 1985 exceed twenty-five (25) tons per year and thus 326 IAC 8-1-6 could be applicable. The source has agreed to limit the VOC usage from EU 7-5 to less than twenty-five (25) tons per year.

- (1) The amount of resins delivered to pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines shall be limited by the following equation, such that the total VOC delivered to the pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines is less than twenty-five (25) tons per twelve (12) consecutive month period.

Less than 25 tons of VOC per year = Less than  $0.490 * \text{Amount of Resin \#1 (tons/yr)} + 0.390 * \text{Amount of Resin \#2 (tons/yr)} + 0.750 * \text{Amount of Resin \#3 (tons/yr)}$

- (2) The VOC content of the three (3) resins shall not exceed the following:
  - (A) 980 pounds per ton of resin #1,
  - (B) 780 pounds per ton of resin #2, and
  - (C) 1,500 pounds per ton of resin #3.

Compliance with these limits make the requirements of 326 IAC 8-1-6 not applicable and also makes the requirements of 326 IAC 2-2 not applicable.

#### 326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicators at the foundry paint booth, known as EU 5-2, shall be limited to 3.5 pounds of VOCS per gallon of coating less water, for extreme performance coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the paint booth is in compliance with this requirement.

#### Insignificant Activities

##### 326 IAC 6-1 (Nonattainment area limitations)

The particulate matter (PM) emissions from the brazing, cutting, soldering, welding, grinding, machining operations as well as the holding and rod furnaces shall not exceed 0.03 grains per dry standard cubic foot of exhaust air.

##### 326 IAC 8-3-2 (Cold Cleaner Operations)

##### 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The degreasing operation at the source is not a solvent-based degreasing operation and therefore is not subject to the requirements of either 326 IAC 8-3-2 or 326 IAC 8-3-5. There are four (4) manual parts cleaning stations that are used by the maintenance department. The present four (4) manual parts cleaning stations are probably newer than 1980, but the function has existed since the foundry started in the 1800s.

### 326 IAC 20-6 (Halogenated Solvent Cleaning)

The degreaser is not subject to this rule and 40 CFR 63 Subpart T since it does not use any halogenated solvents.

### Testing Requirements

- (a) The following stacks represent a significant portion of the total PM from the source and are all controlled by baghouses and will require testing to show compliance with PM emission rates.
  - (1) The sand handling, EU 2-4 requires PM testing of Stack 49 to show compliance with the 0.01 grain loading limit pursuant to 326 IAC 6-1-18.
  - (2) The sand handling, EU 3-4 requires PM testing of Stack 51 to show compliance with the 0.017 grain loading limit pursuant to 326 IAC 6-1-18.
  - (3) Stack 46 which exhausts emissions from EU 4-1, EU 4-2b, EU 4-3, EU 4-4 and EU 4-7 requires PM testing to show compliance with the 0.03 grain loading limit pursuant to 326 IAC 6-1 which also renders the requirements of 326 IAC 2-2 not applicable to the modifications involving EU 4-1, EU4-2b and EU 4-7.
  - (4) Stack 46 which exhausts emissions from EU 4-1, EU 4-2b, EU 4-3, EU 4-4 and EU 4-7 requires PM<sub>10</sub> testing to show compliance with the 0.025 grain loading limit to render the requirements of 326 IAC 2-2 not applicable to the modifications involving EU 4-1, EU4-2b and EU 4-7.
- (b) Within 180 days after re-directing the scrubber exhaust to the outside atmosphere associated with Laempe LL 30 core machine, known as EU 7-4b, in order to demonstrate compliance with Condition D.6.1(a), the Permittee shall perform SO<sub>2</sub> testing of the emission rate and scrubber efficiency utilizing Method 6 (40 CFR 60, Appendix A) for SO<sub>2</sub>, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if these facilities are in compliance.
- (c) Although compliance with 326 IAC 6-1 of 0.03 grains per dry standard cubic foot of outlet air has been mathematically shown for all of the general ventilation exhausts, two (2) of the demonstrations were at 0.03 grains per dry standard cubic foot of outlet air. Therefore, IDEM, OAQ is requiring PM testing to show compliance with the grain loading limit for the East Foundry main molding area general ventilation exhaust for the main molding area and the South Foundry general ventilation exhaust.

### Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The foundry has applicable compliance monitoring conditions as specified below:

- (a) Visible emissions notations of the stack exhausts specified in the following table shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Emission Unit	Description	Stack Exhaust
1-1	Three (3) Electric Induction Furnaces	47
1-4	Scrap Preheater	50
2-3	Shakeout Operation	49
2-4	Sand Handling	49
2-6	New Sand Silo	49
3-3	Shakeout	44
3-4	Sand Handling	51
4-1 4-2b 4-3 4-4 4-7	Hunter Molding, Pouring and Cooling Sinto Molding, Pouring and Cooling Shakeout Sand Handling Sinto Molding, Pouring and Cooling	46
5-1	Three (3) Mechanical Blasters	43
5-3	Grinding	16, 16A and 42
5-4	#2 Spinner Hanger Blaster	5
5-6	Two (2) Tumblast Mechanical Blasters	45

- (b) The Permittee shall record the total static pressure drop across all baghouses controlling the foundry operations at least once per shift when the foundry is in operation. When for any one reading, the pressure drop across the baghouses are outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee

shall take reasonable response steps in accordance with the Compliance Response Plan. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

- (c) An inspection shall be performed each calendar quarter of all bags controlling the foundry operations when venting to the atmosphere specified in the following table. A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

<b>Emission Unit</b>	<b>Baghouse Description</b>
1-4	Preheater
2-3, 2-4 & 2-6	East Foundry
3-3	South Foundry - Shakeout
3-4	South Foundry - Sand System
4-1 4-2b 4-3 4-4 4-7	Middle Foundry
5-1	Wheelabator
5-3	Grinding
5-4	#2 Spinner Hanger
5-6	Tumblast

- (d) In the event that bag failure has been observed:
- (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B - Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
  - (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

- (e) An inspection shall be performed each calendar quarter of the cyclone controlling the grinding operation (EU 5-3) when venting to the atmosphere. A cyclone inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors.
- (f) In the event that cyclone failure has been observed:  
  
Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (g) Monthly inspections shall be performed to verify the placement, integrity and particle loading of the bin vent filters for EU 2-5, EU 3-6, EU 7-1, EU 7-4a, EU 7-4b, EU 7-6, EU 7-7 and EU 7-8. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit. The monthly inspections are sufficient because the potential emissions from these emission units are small.

These monitoring conditions are necessary because the baghouses, cyclone and bin vent filters for the foundry must operate properly to ensure compliance with 326 IAC 2-2, 326 IAC 2-3, 326 IAC 6-1, 326 IAC 5-1 and 326 IAC 2-7 (Part 70).

- (h) The Permittee shall record the total static pressure drop across the scrubbers controlling the seven (7) core machines using the iso-set core process, four (4) Gaylord machines (EU 7-4a), the Laempe LL 30 core machine (EU-7-4b) and the two (2) Shalco core machines (EU 7-8), at least once per shift when any of the core machines are in operation. When for any one reading, the pressure drop across the scrubbers are outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with the Compliance Response Plan. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (i) The Permittee shall record the pH of the scrubbing liquor controlling the seven (7) core machines using the iso-set core process, four (4) Gaylord machines (EU 7-4a), the Laempe LL 30 core machine (EU-7-4b) and the two (2) Shalco core machines (EU 7-8), at least once per shift when the core machines are in operation. When for any one reading, the pH of the scrubbing liquor is outside the normal range of 9.0 and 14.0 or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with the Compliance Response Plan. A pH that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (j) The Permittee shall record whether or not the scrubber flow switches used in conjunction with the two (2) scrubbers controlling SO<sub>2</sub> emissions from the seven (7) core machines using the iso-set core process, four (4) Gaylord machines (EU 7-4a), the Laempe LL 30 core machine (EU-7-4b) and the two (2) Shalco core machines (EU 7-8), are operating

properly at least once per month. When for any one reading, the scrubber flow switch is not operating properly, the Permittee shall take reasonable response steps in accordance with the Compliance Response Plan. A not operating scrubber flow switch is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The scrubber manufacturer feels that it is not advisable to add flow measurement to the scrubber. This is a small "package" unit. It comes with a paddle-type flow switch as a standard feature. The switch is interlocked to the operation and will shutdown the scrubber if there is insufficient flow for proper operation. The switch is calibrated in the factory. It cannot be recalibrated in the field. If the switch wears, it will cause the unit to shutdown prematurely, that is, when there still is sufficient flow. Any reduction of operating efficiency in the scrubber will be quickly noticeable to workers in the area because the scrubber exhausts indoors and will produce a noxious sulfur odor. Therefore, the use of flow switches has been deemed appropriate in lieu of flow rate measurements once per shift.

(k) An inspection shall be performed each calendar quarter of the scrubbers. Defective scrubber part(s) shall be replaced. A record shall be kept of the results of the inspection.

(l) In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C).

These monitoring conditions are necessary because the scrubbers for the core machines must operate properly to ensure compliance with 326 IAC 2-2 and 326 IAC 2-7 (Part 70).

(m) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters for paint booth, EU 5-2. To monitor the performance of the dry filters, weekly observations shall be made of the overspray while the paint booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(n) Monthly inspections shall be performed of the coating emissions from the paint booth stack exhaust, known as Stack 100 for the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an overspray emission, evidence of overspray emission, or other abnormal emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(o) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because the filters for the paint booth must operate properly to ensure compliance with 326 IAC 6-1, 326 IAC 5-1 and 326 IAC 2-7 (Part 70).

## **Conclusion**

The operation of this gray and ductile iron foundry shall be subject to the conditions of the attached proposed **Part 70 Permit No. T 141-6087-00007**.

## Indiana Department of Environmental Management Office of Air Quality

### Addendum to the Technical Support Document for a Part 70 Operating Permit

**Source Name:** RMG Foundry, LLC d/b/a RMG Foundry  
**Source Location:** 500 South Union Street, Mishawaka, Indiana 46544  
**County:** St. Joseph  
**SIC Code:** 3321  
**Operation Permit No.:** T 141-6087-00007  
**Permit Reviewer:** Mark L. Kramer

On February 16, 2002, the Office of Air Quality (OAQ) had a notice published in the South Bend Tribune, South Bend, Indiana, stating that RMG Foundry, LLC d/b/a RMG Foundry had applied for a Part 70 Operating Permit to operate a stationary gray and ductile iron foundry source. The notice also stated that OAQ proposed to issue a Part 70 Operating Permit for this operation and provided information on how the public could review the proposed Part 70 Operating Permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Part 70 Operating Permit should be issued as proposed.

On March 19, 2002, James Hanlon of EIS Environmental Engineers, Inc., submitted comments on behalf of RMG Foundry, LLC d/b/a RMG Foundry on the proposed Part 70 Operating Permit. The comments are as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.

#### Comment 1:

RMG understands that IDEM considers noncompliance with any other condition of the permit to also constitute noncompliance with this section. There is no reason why a Permittee should be in jeopardy for two violations just because of this "general duty" clause. RMG requests that section (e) be added as shown to address this situation.

#### B.8 Compliance with Permit Conditions ~~[326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]~~

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
- (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; or
  - (3) Denial of a permit renewal application.
- (b) Noncompliance with any provisions of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.
- (c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

- (e) This section shall not be grounds for a separate incidence of noncompliance in the event of noncompliance with any other condition of this permit.

**Response 1:**

Permits issued under the Title V program in Indiana are enforceable by both the State and the U.S. EPA. During discussions that occurred regarding the approval process for Indiana's Title V program, the U.S. EPA made it very clear that OAQ should not specify language in any Title V permit that could be construed to abridge enforcement discretion. Condition B.8 will be changed as follows:

**B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]**

- (a) **As provided in 326 IAC 2-7-5(6),** The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:

**Comment 2:**

To fulfill the permit shield requirement that non-applicable items be specifically identified, RMG requests that the following information be added to the permit:

- (1) Incorporate from the TSD the list "Insignificant Activities" (beginning on page 6 of 47) items (a) through (z).
- (2) Incorporate from the TSD the list "Permitted Emission Units and Pollution Control Equipment Eliminated from Service" (beginning on page 5 of 47) items (a) through (n).
- (3) Incorporate from the TSD the list "Federal Rule Applicability" (beginning on page 20 of 47) items (a) through (c).
- (4) Incorporate from the TSD the list "State Rule Applicability-Individual Facilities" the emission units constructed prior to the August 8, 1977, PSD applicability date (beginning on page 21 of 47) items (a) through (h).

**B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]**

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

**Response 2:**

Condition A.3 has had the other insignificant activities that are not specifically regulated added as follows. The insignificant activity "asbestos abatement projects regulated by 326 IAC 14-10" and the burn-off oven regulated by 326 IAC 4-2 have been added to the list of insignificant activities that are specifically regulated in Condition A.3 and Section D.7. Also Condition 7.2 has been added to address the specific requirements applicable to the burn-off oven as follows:

A.3 ~~Specifically Regulated~~ Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
[326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities as defined in 326 IAC 2-7-1(21) which are specifically regulated:

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. (326 IAC 6-1)
- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. (326 IAC 6-1)
- (c) Other activities or categories not previously identified with emissions equal to or less than the insignificant thresholds of five (5) pounds per hour or twenty-five (25) pounds per day for PM, SO<sub>2</sub>, and/or NO<sub>x</sub>, three (3) pounds per hours or fifteen (15) pounds per day for VOC, twenty-five (25) pounds per day for CO or 0.6 tons per year or 3.29 pounds per day of lead:
  - (1) Powder coating, equipped with dry filters, capacity: 255 units per hour. (326 IAC 6-1)
  - (2) Holding furnace, known as Ajax. (326 IAC 6-1)
  - (3) Rod furnace. (326 IAC 6-1)
- (d) **Asbestos abatement projects regulated by 326 IAC 14-10.**
- (e) **Natural gas-fired combustion source with heat input equal to or less than ten million (10,000,000) British thermal units per hour: One (1) burn-off oven with an integral afterburner, rated at 0.4 million British thermal units per hour. This burn-off oven is designed for removing excess coatings from paint line fixtures and parts to be coated and is not to be used for any other purpose. (326 IAC 4-2)**

This stationary source also includes the following insignificant activities as defined in 326 IAC 2-7-1(21) which are not specifically regulated:

- (f) **Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour (total 55.933 million British thermal units per hour):**
  - (1) **One (1) cure oven, rated at 3.5 million British thermal units per hour.**

(2) One (1) washer, rated at 1.5 million British thermal units per hour.

(3) One (1) dry-off oven, rated at 1.5 million British thermal units per hour.

**Department 10**

(4) One (1) Door Blast Heater, rated at 0.5 million British thermal units per hour.

**Department 23/40**

(5) One (1) gas unit heater rated at 0.250 million British thermal units per hour.

(6) One (1) gas unit heater rated at 0.225 million British thermal units per hour.

(7) One (1) radiant heater rated at 0.030 million British thermal units per hour.

**Department 24**

(8) Two (2) ladle heaters rated at 0.115 million British thermal units per hour, each.

(9) Ten (10) radiant gas heaters rated at 0.053 million British thermal units per hour, each.

(10) One (1) air makeup unit rated at 5.000 million British thermal units per hour.

(11) One (1) air makeup unit rated at 6.000 million British thermal units per hour.

(12) One (1) ladle heater rated at 1.000 million British thermal units per hour.

**Department 26**

(13) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

(14) Four (4) ladle heaters rated at 0.500 million British thermal units per hour, each.

(15) Four (4) ladle heaters rated at 1.000 million British thermal units per hour, each.

(16) One (1) air makeup unit rated at 10.000 million British thermal units per hour.

**Department 27**

(17) One (1) gas radiant heater rated at 0.053 million British thermal units per hour.

(18) One (1) core oven rated at 0.270 million British thermal units per hour.

(19) One (1) shell core machine, Harrison 1616 rated at 0.145 million British thermal units per hour.

(20) Three (3) core machines, Shalco V-180 rated at 0.400 million British thermal units per hour, each.

(21) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

**Department 29**

(22) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

(23) One (1) gas radiant heater rated at 0.053 million British thermal units per hour.

**Department 30**

(24) One (1) ladle heater rated at 0.115 million British thermal units per hour.

(25) Three (3) ladle heaters rated at 0.088 million British thermal units per hour, each.

(26) Two (2) ladle heaters rated at 0.500 million British thermal units per hour, each.

**Department 31**

(27) One (1) gas air makeup unit rated at 3.000 million British thermal units per hour.

(28) Three (3) ladle heaters rated at 1.000 million British thermal units per hour, each.

(29) One (1) ladle heater rated at 0.115 million British thermal units per hour.

(30) Five (5) gas radiant heaters rated at 0.053 million British thermal units per hour, each.

(31) Two (2) gas unit heaters rated at 0.105 million British thermal units per hour, each.

(32) One (1) gas unit heater rated at 0.260 million British thermal units per hour.

(33) Two (2) Ajax torches.

**Department 39**

(34) One (1) gas air makeup unit rated at 7.500 million British thermal units per hour.

**Foundry Locker Room**

(35) One (1) gas unit heater rated at 0.250 million British thermal units per hour.

(g) Propane for liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour.

- (h) Combustion source flame safety purging on startup.**
- (i) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.**
- (j) The following VOC and HAP storage containers:**
  - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.**
  - (2) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.**
- (k) Refractory storage not requiring air pollution control equipment.**
- (l) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.**
- (m) Machining where an aqueous cutting coolant continuously floods the machining interface.**
- (n) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.**
- (o) Cleaners and solvents characterized as follows:**
  - (1) having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF) or;**
  - (2) having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.**
- (p) Closed loop heating and cooling systems.**
- (q) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.**
- (r) Noncontact cooling tower systems with either of the following: Forced and induced draft cooling tower system not regulated under a NESHAP.**
- (s) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.**
- (t) Paved and unpaved roads and parking lots with public access.**
- (u) Asbestos abatement projects regulated by 326 IAC 14-10.**
- (v) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those**

**activities would not be associated with any production process.**

- (w) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.**
- (x) On-site fire and emergency response training approved by the department.**
- (y) Other emergency equipment as follows: Stationary fire pumps.**
- (z) Purge double block and bleed valves.**
- (aa) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38EC).**
- (bb) A laboratory as defined in 326 IAC 2-7-1(21)(D).**

SECTION D.7

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. (326 IAC 6-1)
- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. (326 IAC 6-1)
- (c) Other activities or categories not previously identified with emissions equal to or less than the insignificant thresholds of five (5) pounds per hour or twenty-five (25) pounds per day for PM, SO<sub>2</sub>, and/or NO<sub>x</sub>, three (3) pounds per hours or fifteen (15) pounds per day for VOC, twenty-five (25) pounds per day for CO or 0.6 tons per year or 3.29 pounds per day of lead:
  - (1) Powder coating, equipped with dry filters, capacity: 255 units per hour. (326 IAC 6-1)
  - (2) Holding furnace, known as Ajax. (326 IAC 6-1)
  - (3) Rod furnace. (326 IAC 6-1)
- (d) Asbestos abatement projects regulated by 326 IAC 14-10.**
- (e) Natural gas-fired combustion source with heat input equal to or less than ten million (10,000,000) British thermal units per hour: One (1) burn-off oven with an integral after-burner, rated at 0.4 million British thermal units per hour. This burn-off oven is designed for removing excess coatings from paint line fixtures and parts to be coated and is not to be used for any other purpose. (326 IAC 4-2)**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**D.7.2 Incinerator [326 IAC 4-2]**

Pursuant to 326 IAC 4-2-2 (Incinerators: requirements), the one (1) natural gas fired burn-off oven shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Comply with 326 IAC 5-1 and 326 IAC 2;
- (c) Be maintained properly as specified by the manufacturer;
- (d) Be operated according to the manufacturer's recommendations;
- (e) Be operated so that emissions of noxious odors are prevented (not federally enforceable);
- (f) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air; and
- (g) Not create a nuisance or a fire hazard.

If any of the above result, the burning shall be terminated immediately.

Condition A.4 has been added to the proposed Part 70 Operating Permit to incorporate the list of permitted emission units and pollution control equipment from the Technical Support Document that has been eliminated from service and are no longer permitted to operate. The proposed Condition A.4 has been re-numbered as Condition A.5. Condition B.13 has incorporated the statements of non-applicability as requested as well as including the non-applicability of Subpart B to the Foundry Paint Booth as a result of an additional comment submitted on April 22, 2002 (see Comment 28) as follows:

**A.4 Emission Units and Pollution Control Equipment Eliminated From Service**

This stationary source has eliminated from service the following previously permitted facilities and pollution control devices: These facilities are no longer permitted to operate.

- (a) The one (1) wire feed system for the inoculation of ductile iron in Department 26, permitted under CP 141-3867-00007, issued on September 20, 1994.
- (b) One (1) paint dip tank prime coat, permitted under D 1 132, issued January 6, 1993 and January 6, 1997, eliminated in 1997.
- (c) One (1) Binks paint spray booth, permitted under D 1 135, issued January 6, 1993 and January 6, 1997, eliminated in 1997.
- (d) One (1) paint dip tank (prime coat), permitted under D 1 137, issued January 6, 1993 and January 6, 1997, eliminated in 1993.
- (e) One (1) manual pulley blast booth, known as EU 12-1, installed in 1986, equipped with a baghouse for PM control, released to the general ventilation, capacity: 0.5 tons of steel shot per hour, removed from the foundry in 1999.

- (f) **One (1) pulley cleaning operation, known as EU 12-2, installed in 1970, released to the general building ventilation, capacity: 0.0015 tons of solvent per hour, removed from the foundry in 1999.**
- (g) **One (1) pulley lagging application operation, known as EU 12-3, installed in 1986, equipped with hand rollers, released to the general building ventilation, capacity: 0.00075 tons of adhesive per hour, removed from the foundry in 1999.**
- (h) **One (1) natural gas-fired refuse incinerator, known as EU 11-1, rated at 1.9 million British thermal units per hour, capacity: 800 pounds of refuse per hour, limited to 750 tons of refuse per year, permitted under D 1 175, issued January 6, 1993 and January 6, 1997 removed from service in April 1999.**
- (i) **One (1) standby coal-fired boiler rated at 13 million British thermal units per hour.**
- (j) **One (1) shot blast cleaning machine for charge.**
- (k) **One (1) Squeezers molding, pouring and cooling line, known as EU 4-6, installed in 1959, released to the general building ventilation, capacity: 1.5 tons of molten iron per hour, removed by SSM 141-13749 in 2001.**

#### Department 11

- (l) **One (1) steel shop paint booth, known as EU 6-1, equipped with assisted airless spray applicators, equipped with dry filters for overspray control, installed before 1968, exhausted to Stack 4, capacity: 5.0 gallons of paint per hour.**
- (m) **One (1) 60 horsepower boiler rated at 2.511 million British thermal units per hour.**
- (n) **One (1) conveyor drive paint booth, known as EU 8-2, installed in 1970, equipped with air-assisted airless spray applicators, equipped with dry filters for overspray control, exhausted to Stack 99, capacity: 5.0 gallons of paint per hour.**

#### A.54 Part 70 Permit Applicability [326 IAC 2-7-2]

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IDEM, OAQ's determination of non-applicability of certain Federal rules and 326 IAC 2-2 (Prevention to certain emission units and insignificant activities listed in the Technical Support Document has been incorporated into Condition B.13 as follows:

#### B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

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- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) In addition to the nonapplicability determinations set forth in Sections D of this permit, the IDEM, OAQ has made the following determinations regarding this source:**
- (1) The Part 70 application for this foundry was submitted in June 1996, therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable during this permit term.**
  - (2) The two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, installed in 1968, rated at 16.4 million British thermal units per hour, each, are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.4), Subpart Dc, since these boilers were installed prior to the June 9, 1989 applicability date for this rule.**
  - (3) The following National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63) are not applicable to this source.**
    - (A) The degreaser is not subject to 40 CFR 63, Subpart T since it does not use any halogenated solvents.**
    - (B) A single HAP is limited to less than ten (10) tons per year and the combination of HAPs is limited to less than twenty-five (25) tons per year in the foundry paint booth, therefore, the requirements of 40 CFR Part 63 Subpart B are not applicable to the foundry paint booth.**
  - (4) As of the date of issuance of this permit none of the following emission units are subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) because these emission units were constructed prior to the August 7, 1977, PSD applicability date:**
    - (A) Melting Operations - Department 31**
      - (1) Three (3) electric induction furnaces, known as EU 1-1 (also known as point 31P), installed in 1974.**
      - (2) One (1) inoculation operation, known as EU 1-2, installed before 1974.**
      - (3) One (1) charge handling operation, known as EU 1-3, installed 1974.**
    - (B) East Foundry Operations- Department 24**
      - (4) One (1) large pinlift molding, pouring and cooling line, known as EU 2-1, installed in 1975.**
      - (5) One (1) small pinlift molding, pouring and cooling line, known as EU 2-2, installed in 1975.**

- (6) One (1) shakeout operation, known as EU 2-3, installed in 1975.
  - (7) One (1) sand handling operation, known as EU 2-4 (also known as point 35P), installed in 1975.
  - (8) One (1) new sand silo, known as EU 2-6, installed before 1974.
  - (9) One (1) floor molding, pouring and cooling line, known as EU 2-7, installed in 1895.
- (C) South Foundry Operations - Department 26
- (10) One (1) pinlift molding, pouring and cooling line, known as EU 3-1, installed in 1959.
  - (11) One (1) slinger molding, pouring and cooling line, known as EU 3-2, installed in 1959.
  - (12) One (1) shakeout operation, known as EU 3-3 (also known as point 34P), only one (1) of two (2) shakeout units, installed prior to 1970.
  - (13) One (1) sand handling operation, known as EU 3-4 (also known as point 33P), installed in 1959.
  - (14) One (1) North SPO molding, pouring and cooling line, known as EU 3-7, installed in 1959.
  - (15) One (1) South SPO molding, pouring and cooling line, known as EU 3-8, installed in 1959.
- (D) Middle Foundry Operations - Department 30
- (16) One (1) shakeout operation, known as EU 4-3, installed in 1951.
  - (17) One (1) sand handling operation, known as EU 4-4, installed before 1974.
  - (18) One (1) new sand feed hopper, known as EU 4-5, installed before 1974.
- (E) Cleaning and Finishing Operations - Department 29
- (20) Two (2) mechanical blasters (wheel blast and #1 spinner hanger), known as EU 5-1 (also known as point 37P), installed in 1971 and 1970, respectively.
  - (21) One (1) foundry paint booth, known as EU 5-2, installed before 1968.



- (gf) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (hg) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(7)(8)]

**Comment 3:**

326 IAC 2-7-6(2)(D), on which the following permit condition is based, contains the clause that was added below. IDEM cannot amend a duly promulgated regulation by means of a permit condition. In the absence of a rule change, the clause must be included.

**B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2]**

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy any records that must be kept under the conditions of this permit;
- (c) Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) ~~§ As authorized by the CAA, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and~~
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**Response 3:**

Condition B.22 has been revised to clarify the source of the authorization as follows:

**B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC13-17-3-2]**

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) **As authorized by the Clean Air Act, IC 13-14-2-2, IC13-17-3-2 and IC 13-30-3-1, H**have access to and copy any records that must be kept under the conditions of this permit;

- (c) **As authorized by the Clean Air Act, IC 13-14-2-2, IC13-17-3-2 and IC 13-30-3-1,** inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) **As authorized by the Clean Air Act, IC 13-14-2-2, IC13-17-3-2 and IC 13-30-3-1,** sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) **As authorized by the Clean Air Act, IC 13-14-2-2, IC13-17-3-2 and IC 13-30-3-1,** utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**Comment 4:**

326 IAC 2-1.1-11 allows IDEM to seek stack testing, monitoring, or reporting at any time. However, such an order would be subject to administrative or judicial review. Acceptance of this section without appeal could be argued by IDEM to be a waiver of this right. RMG requests that the following change be added to preserve this right.

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA. Any such requirement to test, monitor, or report, not already required in Section D, is subject to administrative and judicial review as a final agency action.

**Response 4:**

In addition to the source's right to appeal any aspect of the permit, any requirements imposed by the commissioner would be subject to administrative and judicial review as a final agency action. The proper appeal language is included in each and every Agency determination that is made. Since administrative and judicial review as a final agency action is always available to a source, it is not necessary to include the suggested wording in Condition C.9.

The following was added to Condition C.9 (Compliance Requirements) to state what OAQ does when stack testing, monitoring, or reporting is required to assure compliance with applicable requirements as follows:

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements **by issuing an order under 326 IAC 2-1.1-11.** Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

**Comment 5:**

Permit condition C.13 (b) relates to the accuracy of pH and flow measurement devices. It is a direct copy of permit condition C.13 (a) that relates to the accuracy of pressure gauges. The problem is that pressure gauges are very different devices than pH meters or flow meters. While RMG agrees with the intent of assuring the accuracy of monitoring devices, the proposed wording creates an unrealistic set of criteria for selection of pH and flow measurement devices.

The value of pH is actually a logarithmic function. Applying percentages to these values does not make sense mathematically. For instance, the permit lists the normal operating range for the sulfur dioxide scrubbers as 9 to 14. This represents ionic strengths of 1,000,000,000 to 100,000,000,000. In other words, the low value is 0.01% of the higher value. This makes the proposed use of percentages unworkable. Even the best pH meter will drift if subjected to high or low pH on a continuous basis. The only way to assure accuracy is to calibrate frequently against a known standard. RMG suggests that the above wording be used with regard to pH meter accuracy.

Flow meters are available in several types based on several technologies. The choice of operating principle is driven principally by the application; not all flow meters work well in all mediums. The accuracy of flow meters is also a function of their operating principle. In summary, there is no one-size-fits-all approach for selecting flow meters, each must be chosen on a case-by-case basis. Calibration of flow meters is also a problem. Calibration in place is often difficult and bench calibrated meters may not be accurate under service conditions. Since there are no flow meter applications in this permit, RMG suggests removing all references to flow meter performance from this permit.

C.13 Pressure Gauge and Other Instrument Specifications [326 IAC. 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- ~~(b) Whenever a condition in this permit requires the measurement of a flow rate and pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.~~
- (b) "The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one pH point."
- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Response 5:**

IDEM, OAQ concurs that a percentage change for pH is not as appropriate as the suggestion to routinely calibrate the pH meter and all references to flow meter performance have been deleted. The wording suggested as been incorporated in Condition C.13 (now C.12) as follows:

C.13 Pressure Gauge and Other Instrument Specifications [326 IAC. 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- ~~(b) Whenever a condition in this permit requires the measurement of a flow rate and pH level, the instrument employed shall have a scale such that the expected normal reading shall be~~

~~no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.~~

**The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one (1) pH point.**

- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Comment 6:**

There is no reason to require notification when an emission unit is shut down because emissions will cease. Delete the reference to emissions unit in (b)(3) as shown below:

C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC.2-7-5]  
[326 IAC 2-7-6]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the ~~emissions unit or control device~~ be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

- (4) Failure to take reasonable response steps shall constitute a violation of the permit.

**Response 6:**

Condition C.16(b)(3) (now C.15(b)(3)), has been revised. This notification requirement has been modified to apply only to situations where the emissions unit will continue to operate for an extended time while the compliance monitoring parameter is out of range. It is intended to provide the IDEM, OAQ an opportunity to assess the situation and determine whether any additional actions are necessary to demonstrate compliance with applicable requirements. Condition C.16(b)(3) (now C.15(b)(3)) is changed. In addition, failure to take reasonable response steps shall be considered deviation of the permit; therefore, Condition C.16(b)(4) (now C.15(b)(4)) was revised. Language was added to C.16(e) (now C.15(e)) to clarify that the records that need to be kept are those instances when, in accordance with Section D, response steps are taken as follows:

C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC.2-7-5]  
[326 IAC 2-7-6]

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- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down **and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify** the IDEM, OAQ ~~shall be promptly notified~~ of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
- (4) Failure to take reasonable response steps shall ~~constitute a violation of~~ **be considered a deviation from** the permit.
- (e) The Permittee shall record all instances when, **in accordance with Section D**, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

**Comment 7:**

The permit citation is not correct. There is no PM limit in this permit. PSD limits are properly stated as tons per year only.

D.1.1 Emission Offset Minor Limit [326 IAC 2-3]

- ~~(a) Pursuant CP 141-4053-00007, issued January 13, 1995, the PM emissions from the natural gas-fired scrap preheater, known as EU 1-4, shall not exceed 5.70 pounds per hour. Therefore, the requirements of 326 IAC 2-3 do not apply.~~
- (b) Pursuant CP 141-4053-00007, issued January 13, 1995, the PM<sub>10</sub> emissions from the natural gas-fired scrap preheater, known as EU 1-4, shall not exceed 3.42 pounds per hour. Therefore, the requirements of 326 IAC 2-3 do not apply.

**Response 7:**

The PM limit contained in Condition D.1.1(a) is required to make the requirements of 326 IAC 2-3 not applicable for the scrap preheater. The pound per hour emission limits in Condition D.1.1(a) and (b) allow IDEM, OAQ to verify compliance with stack testing. A ton per year emission rate can not be verified without the addition of a throughput limit and an associated pound per ton emission rate. If that alternative were implemented, additional record keeping and reporting would be added to the proposed Part 70 Operating Permit. The PM<sub>10</sub> emission limit to render the requirements of 326 IAC

2-3 not applicable was incorporated into CP 141-4053-00007, issued January 13, 1995. However, at that time, since the requirements of 326 IAC 6-1 also satisfied 326 IAC 2-3, a specific PM emission limit was not incorporated into the permit. IDEM, OAQ has written specific emission limits for each rule applicable to a given emission unit or modification. Therefore, the PM emission limit for the scrap preheater has been retained. The reference to the permit issued on January 13, 1995 has been eliminated as follows:

D.1.1 Emission Offset Minor Limit [326 IAC 2-3]

- (a) ~~Pursuant CP 141-4053-00007, issued January 13, 1995, the PM emissions from the natural gas-fired scrap preheater, known as EU 1-4, shall not exceed 5.70 pounds per hour. Therefore, the requirements of 326 IAC 2-3 do not apply.~~
- (b) Pursuant CP 141-4053-00007, issued January 13, 1995, the PM<sub>10</sub> emissions from the natural gas-fired scrap preheater, known as EU 1-4, shall not exceed 3.42 pounds per hour. Therefore, the requirements of 326 IAC 2-3 do not apply.

**Comment 8:**

In creating the Clean Air Act Amendments, Congress mandated, and the courts have upheld, that no new requirements or restrictions shall be created by a Title V permit. The applicable requirements for this emission unit are correctly listed in (a) and (b) above, but (b)(1) and (b)(2) create entirely new limits that are not supported by any regulation. RMG appreciates its responsibility to demonstrate compliance with applicable requirements, but the conditions added here severely limit its options for doing so. RMG requests that (b)(1) and (b)(2) be removed from the permit. If IDEM wishes to incorporate the methodology for calculating compliance within the permit, RMG suggests the following:

- (b) A total of 37.5 tons per twelve (12) consecutive month period. Compliance with this limit shall be calculated by multiplying the metal throughput to the furnaces of grey and ductile iron per twelve (12) month period by one of the following:
- (1) the applicable EPA emission factor, currently 0.9 pounds of PM per ton of iron melted,
  - (2) a source specific emission factor established by stack testing,
  - (3) another emission factor accepted by the Commissioner

D.1.2 Particulate Matter (PM) [326 IAC 6-1-18]

Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the three (3) electric induction furnaces, known as EU 1-1, exhausted to Stack 47 shall not exceed:

- (a) 0.09 grains per dry standard cubic foot of outlet air, equivalent to 19.3 pounds per hour at a flow rate of 25,000 dry standard cubic feet per minute and
- (b) A total of 37.5 tons per twelve (12) consecutive month period.
- ~~(1) PM emissions shall not exceed 0.9 pounds of PM per ton of iron melted, and~~
- ~~(2) Metal throughput to the furnaces shall not exceed 83,333 tons of gray and ductile iron per twelve (12) consecutive month period.~~

### Response 8:

Indiana's Part 70 Operating Program approved by US EPA is a combined New Source Review (NSR) and Part 70 Operating Permit Program. This allows IDEM, OAQ to change NSR requirements through the Part 70 Operating Permit. IDEM has established a US EPA-approved protocol for the procedures to be used when incorporating the provisions of previously issued permits into Part 70 Operating Permits and for combining NSR permits with Part 70 Operating Permits. Individual provisions of previously issued permits maybe incorporated as originally stated, revised, or deleted as described by these procedures. IDEM may supercede previously issued permits in whole or in part under these procedures as long as the Technical Support Document identifies the previously established applicable requirements that will be revised or deleted and the basis for the revisions or deletions.

Compliance with Condition D.1.2 (a) does not ensure compliance with Condition D.1.2(b). Therefore, Condition D.1.2(b) has been retained and in order to be able to verify compliance with the 37.5 ton per year emission limit, IDEM, OAQ requires a specific emission rate combined with an annual throughput limit. At a melt capacity of 21 tons of gray and ductile iron per hour, the potential annual throughput of metal melted is 183,960 tons, which would result in PM emissions far in excess of the limit required with the current emission rate of 0.9 pounds of PM per ton of iron melted. RMG always has the option of stack testing the PM emission rate from the three (3) electric induction furnaces and requesting an increase in the throughput limit if a lower PM emission rate is substantiated by the stack test. If another emission factor is approved or determined through stack testing, RMG can request a modification to the Part 70 Operating Permit.

For clarification, the following wording has been added to Condition D.1.2(b) as follows:

#### D.1.2 Particulate Matter (PM) [326 IAC 6-1-18]

Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the three (3) electric induction furnaces, known as EU 1-1, exhausted to Stack 47 shall not exceed:

- (a) 0.09 grains per dry standard cubic foot of outlet air, equivalent to 19.3 pounds per hour at a flow rate of 25,000 dry standard cubic feet per minute and
- (b) A total of 37.5 tons per twelve (12) consecutive month period. **The three (3) electric induction furnaces, known as EU 1-1, will comply by meeting the following limits:**
  - (1) PM emissions shall not exceed 0.9 pounds of PM per ton of iron melted, and
  - (2) Metal throughput to the furnaces shall not exceed 83,333 tons of gray and ductile iron per twelve (12) consecutive month period **with compliance determined at the end of each month.**

The new language in Condition D.1.2(b)(2) has also been added to the Quarterly Report Form.

### Comment 9:

See the Comment 28 for General Comments on 326 IAC 6-1-2.

RMG understands the requirements of 326 IAC 6-1. However, these emission units are contained entirely within buildings and do not discharge to atmosphere. They do not have capture or control devices, so it is impossible to classify their emissions in terms of concentration in air. This requirement should be removed from the permit. IDEM recognizes that units that vent indoors are not to be regulated; see, for example, Section D.1.9 "Inspections shall be performed... when venting to the

atmosphere.” “Inspections are optional when venting to the indoors.” This comment applies to Conditions D.1.3, D.2.3, D.3.3, D.4.1 and D.6.4.

D.1.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1-2 (Nonattainment area particulate limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) ~~0.03 grains per dry standard cubic foot of outlet air from the scrap preheater, known as EU 1-4, combustion exhausted to Stack 31 and process exhausted to Stack 50, equivalent to 1.03 pounds per hour at a flow rate of 4,000 dry standard cubic feet per minute for Stack 50.~~
- (b) ~~0.03 grains per dry standard cubic foot of outlet air from the inoculation operation, known as EU 1-2, and the charge handling operation, known as EU 1-3, both released to the melting or foundry areas general ventilation.~~

D.2.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) ~~0.03 grains per dry standard cubic foot of outlet air from the shakeout operation, known as EU 2-3, exhausted to Stack 49, equivalent to 8.49 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute.~~
- (b) ~~0.03 grains per dry standard cubic foot of outlet air from the premix silo, known as EU 2-5, connected to Stack 15, equivalent to 0.231 pounds per hour at a flow rate of 900 dry standard cubic feet per minute.~~
- (c) ~~0.03 grains per dry standard cubic foot of outlet air from the new sand silo, known as EU 2-6, exhausted to Stack 49, equivalent to 8.49 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute.~~
- (d) ~~0.03 grains per dry standard cubic foot of outlet air from the large and small pinlift molding, pouring and cooling lines, known as EU 2-1 and EU 2-2, all released to the East Foundry main molding area general ventilation.~~
- (e) ~~0.03 grains per dry standard cubic foot of outlet air from the floor molding, pouring and cooling line, known as EU 2-7, released to the floor molding area general ventilation.~~

D.3.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) ~~0.03 grains per dry standard cubic foot of outlet air from the premix silo, known as EU 3-6, exhausted to Stack 38, equivalent to 0.231 pounds per hour at a flow rate of 900 dry standard cubic feet per minute.~~
- (b) ~~0.03 grains per dry standard cubic foot of outlet air from the pinlift and slinger molding, pouring and cooling lines, known as EU 3-1 and EU 3-2, the new sand bin/hopper, known as EU 3-5 as well as the North and South SPO molding, pouring and cooling lines, known as EU 3-7 and EU 3-8, all released to the South Foundry general ventilation.~~

D.4.1 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) 0.03 grains per dry standard cubic foot of outlet air from the Hunter molding, pouring and cooling line, known as EU 4-1, the Sinto molding and cooling line, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and the Sinto molding, pouring and cooling line, known as EU 4-7, exhausted to Stack 46, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute.
- ~~(b) 0.03 grains per dry standard cubic foot of outlet air from the new sand feed hopper, known as EU 4-5, and the Sinto pouring operations, known as EU 4-2a, both released to the Middle Foundry general ventilation.~~

D.6.4 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- ~~(a) 0.03 grains per dry standard cubic foot of outlet air from the muller sand silo, known as EU 7-1, exhausted to Stack 11, equivalent to 0.231 pounds per hour at a flow rate of 900 dry standard cubic feet per minute.~~
- ~~(b) 0.03 grains per dry standard cubic foot of outlet air from the sand silo Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, exhausted to Stack 58A, equivalent to 0.360 pounds per hour at a flow rate of 1,400 dry standard cubic feet per minute.~~
- ~~(c) 0.03 grains per dry standard cubic foot of outlet air from the sand silo pepset/isoset, known as EU 7-7, both exhausted to Stack 58, equivalent to 0.231 pounds per hour at a flow rate of 900 dry standard cubic feet per minute.~~
- ~~(d) 0.03 grains per dry standard cubic foot of outlet air from the core room raw material handling system associated with the iso-set core-making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b, the pep-set core making process, known as EU 7-5, consisting of two (2) Palmer core machines, and the two (2) Shalco core machines, known as EU 7-8.~~
- (e) 0.01 grains per dry standard cubic foot of outlet air each from the two (2) natural gas-fired boilers, known as EU 10-1 and EU 10-2, respectively, exhausted to Stack 88 and Stack 88A, respectively.

**Response 9:**

326 IAC 6-1-2 states:

Particulate emission limitations; fuel combustion steam generators, asphalt concrete plant, grain elevators, foundries, mineral aggregate operations; modification by commissioner

Authority: IC 13-14-8; IC 13-17-1-1; IC 13-17-3-4; IC 13-17-3-14  
Affected: IC 13-15; IC 13-17

Sec. 2. (a) Particulate matter emissions from facilities constructed after applicable dates in subsections (c) and (d) or not limited by subsections (b), (e), (f), or (g) shall not exceed

seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grains per dry standard cubic foot (dscf)).

The intent of the rule and the current wording above means that an emission unit, regardless of whether it exhausts directly to the atmosphere or indirectly through a building opening or ventilation system, shall comply with grain loading limit of three-hundredths (0.03) grain per dry standard cubic foot (dscf). Reasonable accommodations are made with respect to compliance monitoring or testing. The requirement of the rule is an applicable requirement and must be included in the permit. Therefore, no change to the proposed permit or applicability of 326 IAC 6-1 is necessary for Conditions D.1.3, D.2.3, D.3.3, D.4.1, and D.6.4.

**Comment 10:**

The proposed permit includes a requirement for visual observation of stacks on all shifts during daylight hours. RMG feels that this requirement is excessive. Daily observations are sufficient to protect the environment. Baghouses seldom fail suddenly. The incremental benefit of making observations three times per day rather than once a day is very small in terms of possible prevention of emissions. However, the incremental cost in manpower and paperwork is significant. Three shift observations also create logistical and safety issues as described below.

Obviously, there is not sufficient daylight available year round to make observations on a three-shift basis. At those times of the year when the available daylight is marginal, weather will also be a factor in how much daylight is available. The window of time available for making observations is also smaller on the early and late shifts. Judgement will frequently be involved in determining whether a valid observation can be made. This raises a question as to the enforceability of the permit condition.

Three shift observations will involve at least three different observers. Since any negative observations must be corrected immediately, the only information available to each observer will be that the previous reports were positive. Each observer's only point of reference in determining degradation of baghouse performance will be his own previous day's observations. Thus, these additional daily observations will not improve the response time to a possible problem unless it is catastrophic in nature, which is very unlikely.

Physically making the observations early and late in the day is also a problem. The majority of the stacks cannot be observed from the ground because of the size and location of the buildings relative to the stacks. The roof of the warehouse building is south of all of the stacks and provides a good place to take midday observations. However, this location is not acceptable for making observations on some stacks in the early morning or in the evening because of the relative position of the sun. Reaching acceptable observation points at these times will require traversing the roofs of various buildings. During inclement weather this can be dangerous.

RMG requests that the requirement for visual observations on each shift be changed to daily visual observations. The slight possibility of a potential environmental benefit does not justify tripling the cost of complying plus the many logistical problems that must be overcome to accomplish compliance safely.

This comment applies to paragraph (a) of Conditions D.1.7, D.2.7, D.3.9, D.4.6 and D.5.11.

**D.1.7 Visible Emissions Notations**

(a) Visible emission notations of the three (3) electric induction furnaces, known as EU 1-1 Stack exhaust 47 and of the scrap preheater, known as EU 1-4, Stack exhaust 50 shall be performed once per ~~shift~~ day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

D.2.7 Visible Emissions Notations

- (a) Visible emission notations of the shakeout operation, known as EU 2-3, the sand handling operation, known as EU 2-4, and the new sand silo, known as EU 2-6, Stack exhaust 49 shall be performed once per shift day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

D.3.9 Visible Emissions Notations

- (a) Visible emission notations of the shakeout operation, known as EU 3-3, and the sand handling operation, known as EU 3-4. Stack exhausts 44 and 51 shall be performed once per shift day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

D.4.6 Visible Emissions Notations

- (a) Visible emission notations of the Hunter molding, pouring and cooling line, known as EU 4-1, Sinto molding and cooling line, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto molding, pouring and cooling line, known as EU 4-7, Stack exhaust 46 shall be performed once per shift day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

D.5.11 Visible Emissions Notations

- (a) Visible emission notations of the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6, Stack exhausts 43, 42, 16, 16A, 5 and 45 shall be performed once per shift day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

**Response 10:**

The source should be able to perform visible emissions notations each shift during normal daylight operations of a given facility's emissions. Since Method 9 opacity readings are not required, the observer should be able to determine whether the visible emissions are "normal" or "abnormal" regardless of the weather or the position of the sun.

As the condition states, a trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. This training does not need to include the training to become a certified opacity reader nor does the training need to be done by a certified opacity reader. The purpose of specifying that a "trained employee" perform the visible emissions notations is to make sure that the employee would know the difference between "normal" and "abnormal" visible emissions from the particular process.

During times of inclement weather, it is permissible to take visible emissions notations from the ground, where even if the stack itself is not visible, excess opacity from a facility would be visible. This is not the preferred method during times of normal weather conditions; however to assure safety of the employees, the OAQ will accept this method in place of viewing the actual stack, during times of inclement weather. During times of inclement weather when viewing of the actual stack is not practical, the records of the visible emissions notations should include a statement that visible emissions were observed from the ground where the stack itself was not clearly visible and should also include a description of the type of inclement weather which prevented viewing the stack from the rooftops.

Compliance monitoring conditions are in the permit in order to ensure continuous compliance with the permit limits and conditions. Changing the frequency from once per shift to daily would not accomplish the purpose of compliance monitoring. Baghouse failure can occur suddenly; therefore monitoring of baghouse operational parameters should be more frequently than weekly or even daily in such cases where a source operates more than one shift per day. The OAQ believes that visible emissions notations once per operating shift are a reasonable requirement. Therefore, the requirements to perform visible emissions notations have not been changed to daily in Conditions D.1.7, D.2.7, D.3.9 (now D.3.8), D.4.6 and D.5.11 (now D.5.9).

**Comment 11:**

RMG objects to the use of the phrase “or the range established during the latest stack test.” This is misleading because EPA Method stack tests are not designed to develop a range of acceptable operating parameters. Method tests demonstrate compliance under a specific set of conditions. Emissions are collected over a fixed period of time, then measured as a whole. Thus the emissions value developed is an average of the emissions over that time. The only meaningful way to apply the measurement of associated parameters would be as an average over the same period of time. Any inferences drawn from the variability of these parameters is not valid. These tests do not establish compliance over a range of points for a given parameter as the proposed wording of the permit implies.

If this phrase is meant to imply that the parametric values should be modified in cases where stack testing shows that compliance can be achieved outside of the initial range of values in the permit, RMG agrees with this position. However, we feel that the best way to deal with such an occurrence is by modifying the permit to adjust the operating range of the parameter in question as is provided for in Section C.16(c)(2).

This comment applies to Conditions D.1.8, D.2.8, D.3.10, D.4.7, D.5.12, D.6.11 and 6.12, but only D.1.8 is shown below.

See also the General Comment regarding Federal Enforcement of this permit condition.

**D.1.8 Parametric Monitoring**

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the scrap preheater, known as EU 1-4, at least once per shift when the scrap heater is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water ~~or a range established during the latest stack test~~, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

**Response 11:**

As requested, the phrase “or a range established during the latest stack test,” has been deleted in Conditions D.1.8, D.2.8, D.3.10 (now D.3.9), D.4.7, D.5.12 (now D.5.13), D.6.11 (now D.6.10) and 6.12 (now D.6.11). The phrase has been deleted since Condition C.16(c)(2) (now C.15(c)(2)) relieves the source from the requirement to take response steps if a stack test indicates that compliance can be achieved with compliance monitoring parameters that are outside of the ranges given in the permit. Response steps need not be taken as long as the Permittee has submitted an application for a permit modification and that request has not been denied by the IDEM.

Therefore, Conditions D.1.8, D.2.8, D.3.10 (now D.3.9), D.4.7, D.5.12, D.6.11 (now D.6.10) and 6.12 (now D.6.11) have been changed as follows. Condition D.6.12 (now D.6.11) has added wording to specify that the instrument used for determining the pH shall comply with Section C condition entitled, Pressure Gauge Specifications and Other Instruments

#### D.1.8 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the scrap preheater, known as EU 1-4, at least once per shift when the scrap heater is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water ~~or a range established during the latest stack test~~, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.2.8 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the shakeout operation, known as EU 2-3, the sand handling operation, known as EU 2-4, and the new sand silo, known as EU 2-6, at least once per shift when these facilities are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouses ~~are is~~ outside the normal range of 2.0 and 8.0 inches of water ~~or a range established during the latest stack test~~, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.3.910 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the shakeout and sand handling operations, known as EU 3-3 and EU 3-4 at least once per shift when shakeout and sand handling are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouses are outside the normal range of 2.0 and 8.0 inches of water ~~or a range established during the latest stack test~~, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.4.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the Hunter molding, pouring and cooling line, known as EU 4-1, Sinto molding and cooling line, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto molding, pouring and cooling line, known as EU 4-7, at least once per shift when these processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water ~~or a range established during the latest stack test~~, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.5.12 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6 at least once per shift when these processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouses are outside the normal range of 2.0 and 8.0 inches of water ~~or a range established during the latest stack test~~, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports ~~Failure to Take Response Steps~~. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.6.1044 Scrubber Parametric Monitoring

The Permittee shall record the total static pressure drop across the scrubbers used in conjunction when any of the seven (7) core machines using the iso-set core-making process consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, at least once per shift when any of the core machines are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the scrubbers are outside the normal range of 2.0 and 8.0 inches of water ~~or a range established during the latest stack test~~, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.6.1142 pH of the Scrubbing Liquor

The Permittee shall record the pH of the scrubbing liquor used in conjunction with the iso-set process consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, at least once per shift when the core machines are in operation when venting to the atmosphere. When for any one reading, the pH of the scrubbing liquor is outside the normal range of 9.0 and 14.0 ~~or a range established during the latest stack test~~, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pH reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

**The instrument used for determining the pH shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.**

#### Comment 12:

In creating the Clean Air Act Amendments, Congress mandated, and the courts have upheld, that no new requirements or restrictions shall be created by a Title V permit. The proposed applicable requirements for these emission units create entirely new limits that are not supported by any regulation. RMG requests that the conditions of the permit be modified to reflect the proper PSD limit as shown. Specifically, the five emission units listed were installed in 1979 and must share a combined PSD limit of 25 tons per year. However, arbitrarily assigning emission limits for each and

then back calculating an emission rate based on continuous operation infringes on the Permittee's right to achieve compliance by other means.

This comment applies to Conditions D.2.1, D.3.1 and D.6.1.

D.2.1 PSD Minor Limit [326 IAC 2-2]

~~(a) The PM emissions from the premix silo, known as EU 2-5, equipped with a static bin vent filter, connected to Stack 15 shall not exceed 0.167 pounds per hour.~~

~~(b) The PM<sub>10</sub> emissions from the premix silo, known as EU 2-5, equipped with a static bin vent filter, connected to Stack 15 shall not exceed 0.100 pounds per hour.~~

(a) The total PM emissions from the East Foundry premix silo, known as EU 2-5, the South Foundry shakeout operation, known as EU 3-3, the South Foundry premix silo, known as EU 3-6, the sand silo-Dept 26 & 30, known as EU 7-6, and the sand silo-Pepset, known as EU 7-7, shall not exceed 25 tons per year.

(b) The total PM<sub>10</sub> emissions from the East Foundry premix silo, known as EU 2-5, the South Foundry shakeout operation, known as EU 3-3, the South Foundry premix silo, known as EU 3-6, the sand silo-Dept 26 & 30, known as EU 7-6, and the sand silo-Pepset, known as EU 7-7, shall not exceed 15 tons per year.

Compliance with these PM and PM<sub>10</sub> emission limits renders the requirements of 326 IAC 2-2 not applicable.

D.3.1 PSD Minor Limit [326 IAC 2-2]

~~(a) The PM emissions from the shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44 shall not exceed 5.03 pounds per hour.~~

~~(b) The PM<sub>10</sub> emissions from the shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44 shall not exceed 3.02 pounds per hour.~~

~~(c) The PM emissions from the premix silo, known as EU 3-6, equipped with a static bin vent filter, connected to Stack 38, shall not exceed 0.167 pounds per hour.~~

~~(d) The PM<sub>10</sub> emissions from the premix silo, known as EU 3-6, equipped with a static bin vent filter, connected to Stack 38, shall not exceed 0.100 pounds per hour.~~

(a) The total PM emissions from the East Foundry premix silo, known as EU 2-5, the South Foundry shakeout operation, known as EU 3-3, the South Foundry premix silo, known as EU 3-6, the sand silo-Dept 26 & 30, known as EU 7-6, and the sand silo-Pepset, known as EU 7-7, shall not exceed 25 tons per year.

(b) The total PM<sub>10</sub> emissions from the East Foundry premix silo, known as EU 2-5, the South Foundry shakeout operation, known as EU 3-3, the South Foundry premix silo, known as EU 3-6, the sand silo-Dept 26 & 30, known as EU 7-6, and the sand silo-Pepset, known as EU 7-7, shall not exceed 15 tons per year.

Compliance with these PM and PM<sub>10</sub> emission limits renders the requirements of 326 IAC 2-2 not applicable.

D.6.1 PSD Minor Limits [326 IAC 2-2]

- (a) Pursuant to Source Modification 141-14439, issued September 12, 2001,
- (1) The SO<sub>2</sub> emissions from the two (2) Shalco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, permitted by SSM 141-12444, issued on October 16, 2000, shall not exceed a total of 9.13 pounds per hour, equivalent to less than forty (40) tons per twelve (12) consecutive month period and an overall minimum scrubber efficiency of 79.7%. Therefore, the requirements of 326 IAC 2-2 do not apply.
  - (2) ~~The particulate matter (PM) emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, shall not exceed a total of 5.02 pounds per hour, equivalent to 22.0 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~
  - (3) ~~The PM<sub>10</sub> emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, shall not exceed a total of 3.08 pounds per hour, equivalent to 13.5 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~
- (b) ~~The PM emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, equipped with a static bin vent filter, connected to Stack 58A, shall not exceed 0.167 pounds per hour. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~
- (c) ~~The PM<sub>10</sub> emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, equipped with a static bin vent filter, connected to Stack 58A, shall not exceed 0.100 pounds per hour. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~
- (d) ~~The PM emissions from the sand silo - pepset/isoset, known as EU 7-7, installed in 1979, equipped with a static bin vent filter, connected to Stack 58, shall not exceed 0.167 pounds per hour. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~
- (e) ~~The PM<sub>10</sub> emissions from the sand silo - pepset/isoset, known as EU 7-7, installed in 1979, equipped with a static bin vent filter, connected to Stack 58, shall not exceed 0.100 pounds per hour. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~
- (b) The total PM emissions from the East Foundry premix silo, known as EU 2-5, the South Foundry shakeout operation, known as EU 3-3, the South Foundry premix silo, known as EU 3-6, the sand silo-Dept 26 & 30, known as EU 7-6, and the sand silo-Pepset, known as EU 3-7, shall not exceed 25 tons per year.
- (c) The total PM<sub>10</sub> emissions from the East Foundry premix silo, known as EU 2-5, the South Foundry shakeout operation, known as EU 3-3, the South Foundry premix silo, known as EU 3-6, the sand silo-Dept 26 & 30, known as EU 7-6, and the sand silo-Pepset, known as EU 3-7, shall not exceed 15 tons per year.

On January 31, 2003, the source supplemented the above comment. No specific wording was suggested, but just a general approach as follows to set appropriate limits.

Five emission units installed in 1979 have been lumped together sharing a PSD limit. One of these is EU 3-3 the shakeout at the South Foundry. Specifically, a second shakeout screen was installed in parallel to the existing shakeout. They both discharge to the original baghouse, which has an annual PM emission limit of 5.17 tons per year under 326 IAC 6-1-18. The remaining emission units are either sand silos or premix silos (EU 2-5, EU 3-6, EU 7-6, EU 7-7). These units only produce emissions when sand is being delivered by self-unloading pneumatic truck. If the entire foundry is operating at PTE conditions, the total of all material delivered to these silos would not exceed 15,000 tons per year equivalent to 2.03 tons of particulate before controls, or 0.02 tons per year after controls.

RMG suggests setting a facility-wide reportable limit on sand deliveries of 15,000 tons per year. With this limit in place, PSD limits for the individual silos is unnecessary. The balance of the PSD limits would apply to the shakeout operation (EU 3-3) but they would be moot in light of the existing limits.

In addition, on March 25, 2003, the source requested that the reference to the SSM in Condition D.6.1 be deleted since modifications to the permit are supposed to be rolled into the permit when it is issued or renewed.

#### **Response 12:**

The Part 70 Operating Program approved by US EPA is a combined New Source Review (NSR) and Part 70 Operating Permit Program. This allows IDEM, OAQ to change NSR requirements through the Part 70 Operating Permit. See Response 8.

The PM and PM<sub>10</sub> emission limits contained in Conditions D.2.1(a) and (b) are required to make the requirements of 326 IAC 2-2 not applicable for the premix silo (EU 2-5). The pound per hour emission limits in Conditions D.2.1(a) and (b) have been replaced by the combination of an overall sand throughput limit and a pound per ton emission factor to allow IDEM, OAQ to verify compliance with stack testing, if necessary. Additional record keeping and reporting has been added to the proposed Part 70 Operating Permit. The supplemental comment shows that the source has accepted this concept.

This comment was also made with respect to other emission units (EU 3-6, EU 7-6, and EU 7-7) that appeared in Conditions D.3.1 and D.6.1.

Therefore, Conditions D.2.1, D.3.1 and D.6.1. have had the hourly PM and PM<sub>10</sub> emission limits replaced to render the requirements of 326 IAC 2-2 not applicable by incorporating an overall throughput limit of 15,000 tons of sand and an PM and PM<sub>10</sub> emission factor of 0.27 pounds of PM/ PM<sub>10</sub> per ton of sand. In addition, the reference to the Source Modification 141-14439-14439, issued September 12, 2001, has been deleted.

In addition, the following record keeping in Conditions D.2.12 (now D.2.11), D.3.14 (now D.3.12), and D.6.17 (now D.6.16) has been added and the following reporting changes have been made in Condition D.2.13 (now D.2.12), D.3.15 (now D.3.13), and D.6.18 (now D.6.17) to reflect the overall sand throughput limit as follows:

#### **D.2.1 PSD Minor Limit [326 IAC 2-2]**

**The total throughput of sand to premix silo, known as EU 2-5, and to EU 3-6, EU 7-6 and EU 7-7 combined shall not exceed 15,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

- (a) **PM emissions from the premix silo, known as EU 2-5, shall not exceed 0.27 pounds of PM per ton of sand.**
- (b) **PM<sub>10</sub> emissions from the premix silo, known as EU 2-5, shall not exceed 0.27 pounds of PM<sub>10</sub> per ton of sand.**
- ~~(a) The PM emissions from the premix silo, known as EU 2-5, equipped with a static bin vent filter, connected to Stack 15 shall not exceed 0.167 pounds per hour.~~
- ~~(b) The PM<sub>10</sub> emissions from the premix silo, known as EU 2-5, equipped with a static bin vent filter, connected to Stack 15 shall not exceed 0.100 pounds per hour.~~

Compliance with these ~~PM and PM<sub>10</sub> emission~~ limits renders the requirements of 326 IAC 2-2 not applicable.

#### D.3.1 PSD Minor Limit [326 IAC 2-2]

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- (a) The PM emissions from the shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44 shall not exceed 5.03 pounds per hour.
- (b) The PM<sub>10</sub> emissions from the shakeout operation, known as EU 3-3 (also known as point 34P), consisting of two (2) shakeout units, equipped with a baghouse, known as South Foundry - Shakeout B/H, exhausted to Stack 44 shall not exceed 3.02 pounds per hour.
- (c) **The total throughput of sand to premix silo, known as EU 3-6, and to EU 2-5, EU 7-6 and EU 7-7 combined shall not exceed 15,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**
  - (1) **PM emissions from the premix silo, known as EU 3-6, shall not exceed 0.27 pounds of PM per ton of sand.**
  - (2) **PM<sub>10</sub> emissions from the premix silo, known as EU 3-6, shall not exceed 0.27 pounds of PM<sub>10</sub> per ton of sand.**

**Compliance with these limits renders the requirements of 326 IAC 2-2 not applicable.**

- ~~(c) The PM emissions from the premix silo, known as EU 3-6, equipped with a static bin vent filter, connected to Stack 38, shall not exceed 0.167 pounds per hour.~~
- ~~(d) The PM<sub>10</sub> emissions from the premix silo, known as EU 3-6, equipped with a static bin vent filter, connected to Stack 38, shall not exceed 0.100 pounds per hour.~~

~~Compliance with these PM and PM<sub>10</sub> emission limits renders the requirements of 326 IAC 2-2 not applicable.~~

#### D.6.1 PSD Minor Limits [326 IAC 2-2]

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- ~~(a) Pursuant to Source Modification 141-14439, issued September 12, 2001,~~
  - (a4) The SO<sub>2</sub> emissions from the two (2) Shalco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, permitted by SSM 141-12444, issued on October 16, 2000, shall not exceed a total of 9.13 pounds per hour, equivalent to less than forty (40) tons per twelve (12) consecutive month period and an overall minimum scrubber efficiency of 79.7%. Therefore, the requirements of 326 IAC 2-2 do not apply.

- (b2) The particulate matter (PM) emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, shall not exceed a total of 5.02 pounds per hour, equivalent to 22.0 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.
- (c3) The PM<sub>10</sub> emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, shall not exceed a total of 3.08 pounds per hour, equivalent to 13.5 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.
- (d) **The total throughput of sand to sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, the sand silo - pepset/isoset, known as EU 7-7, and to EU 2-5, and EU 3-6 combined shall not exceed 15,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**
  - (1) **PM emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, and the sand silo - pepset/isoset, known as EU 7-7, shall not exceed 0.27 pounds of PM per ton of sand.**
  - (2) **PM<sub>10</sub> emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, and the sand silo - pepset/isoset, known as EU 7-7, shall not exceed 0.27 pounds of PM<sub>10</sub> per ton of sand.**

**Compliance with these limits renders the requirements of 326 IAC 2-2 not applicable.**

- ~~(b) The PM emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, equipped with a static bin vent filter, connected to Stack 58A, shall not exceed 0.167 pounds per hour. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~
- ~~(c) The PM<sub>10</sub> emissions from the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, equipped with a static bin vent filter, connected to Stack 58A, shall not exceed 0.100 pounds per hour. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~
- ~~(d) The PM emissions from the sand silo - pepset/isoset, known as EU 7-7, installed in 1979, equipped with a static bin vent filter, connected to Stack 58, shall not exceed 0.167 pounds per hour. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~
- ~~(e) The PM<sub>10</sub> emissions from the sand silo - pepset/isoset, known as EU 7-7, installed in 1979, equipped with a static bin vent filter, connected to Stack 58, shall not exceed 0.100 pounds per hour. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.~~

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.2.12 Record Keeping Requirements

- (a) **To document compliance with Condition D.2.1, the Permittee shall maintain records of the total throughput of sand to the premix silo, known as EU 2-5, as well as to EU 3-6, EU 7-6 and EU 7-7 combined on a monthly basis.**

**D.2.13 Reporting Requirements**

A quarterly summary of the information to document compliance with Conditions **D.2.1** and **D.2.2(b)(2)** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**D.3.14 Record Keeping Requirements**

**(a) To document compliance with Condition D.3.1(c), the Permittee shall maintain records of the total throughput of sand to the premix silo, known as EU 3-6, as well as to EU 2-5, EU 7-6 and EU 7-7 combined on a monthly basis.**

**D.3.15 Reporting Requirements**

A quarterly summary of the information to document compliance with Conditions **D.3.1(c)**, **D.3.2(b)(2)(B)** and **D.3.5** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**D.6.17 Record Keeping Requirements**

**(a) To document compliance with Condition D.6.1(b), the Permittee shall maintain records of the total throughput of sand to the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, the sand silo - pepset/isoset, known as EU 7-7, as well as to EU 2-5 and EU 3-6 on a monthly basis.**

**D.6.18 Reporting Requirements**

A quarterly summary of the information to document compliance with Conditions **D.6.1(b)**, **D.6.2(a)** and **D.6.3** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Also the following Quarterly Report form has been added to report the amount of sand handled:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

**Source Name:** RMG Foundry, LLC d/b/a RMG Foundry  
**Source Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Mailing Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Part 70 Permit No.:** T 141-6087-00007  
**Facilities:** Premix silo (EU 2-5), premix silo (EU 3-6), sand silo - Dept. 26 & 30 (South and Middle Foundries) (EU 7-6) and sand silo - pepset/isoset (EU 7-7)  
**Parameter:** Sand Handled  
**Limit:** Total of 15,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Sand Handled (tons)	Sand Handled (tons)	Sand Handled (tons)
	This Month	Previous 11 Months	12 Month Total

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

**Submitted by:** \_\_\_\_\_

**Title / Position:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Attach a signed certification to complete this report.**

**Comment 13:**

In creating the Clean Air Act Amendments, Congress mandated, and the courts have upheld, that no new requirements or restrictions shall be created by a Title V permit. The applicable requirements for this emission unit are correctly listed in (a) and (b) below, but (b)(1) and (b)(2) create entirely new limits that are not supported by any regulation. RMG appreciates its responsibility to demonstrate compliance with applicable requirements, but the conditions added here severely limit its options for doing so. RMG requests that (b)(1) and (b)(2) be removed from the permit. If IDEM wishes to incorporate the methodology for calculating compliance within the permit, RMG suggests the following:

RMG also has the following comments on emission factors for sand handling. The only emission factor available for sand handling systems in a grey iron foundry is 3.6 pounds per ton of sand handled. This is a combined emission factor listed in the FIRE database as "sand grinding/ handling". RMG does not grind sand. Therefore, this emission factor overstates the emission rate for this facility. By comparison, the emission rate listed in FIRE for "mineral products – construction sand and gravel - material transfer and conveying" (which is more representative of RMG's operation) is 0.029 pounds per ton. Considering that foundry sand has a much lower dust content than construction sand and gravel, it would be logical to expect that the emission factor for foundry sand would be even lower. Despite the fact that this emission factor seems to be excessively high, RMG will accept this emission factor until a source specific emission factor is determined by testing.

This comment applies to Conditions D.2.2(b) and D.3.2(b)(2).

D.2.2 Particulate Matter (PM) [326 IAC 6-1-18]

Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the sand handling operation, known as EU 2-4 (also known as point 35P) exhausted to Stack 49 shall not exceed:

- (a) 0.01 grains per dry standard cubic foot of outlet air, equivalent to 2.83 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute and
- (b) 3.16 tons per year.
  - ~~(1) PM emissions shall not exceed 3.6 pounds of PM per ton of sand handled.~~
  - ~~(2) The Permittee shall not exceed a limit of 177,329 tons of sand per twelve (12) consecutive month period in the sand handling operation, known as EU 2-4.~~
- (b) A total of 3.16 tons per twelve (12) consecutive month period. Compliance with this limit shall be calculated by multiplying the tons of sand handled per twelve (12) month period by the value of (1-baghouse efficiency) then multiplying by one of the following:
  - 1) the applicable EPA emission factor, currently 3.6 pounds of PM per ton of sand.
  - 2) a source specific emission factor established by stack testing.
  - 3) another emission factor accepted by the Commissioner

D.3.2 Particulate Matter (PM) [326 IAC 6-1-18]

- (a) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the shakeout operation, known as EU 3-3, exhausted to Stack 44 shall not exceed:

- (1) 0.012 grains per dry standard cubic foot of outlet air, equivalent to 2.78 pounds per hour at a flow rate of 27,000 dry standard cubic feet per minute and
  - (2) 5.17 tons per year.
- (b) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the sand handling operation, known as EU 3-4, exhausted to Stack 51 shall not exceed:
- (1) 0.017 grains per dry standard cubic foot of outlet air, equivalent to 4.01 pounds per hour at a flow rate of 27,500 dry standard cubic feet per minute and
  - (2) 6.66 tons per twelve (12) consecutive month period.
    - (A) ~~PM emissions shall not exceed 3.6 pounds of PM per ton of sand handled.~~
    - (B) ~~The Permittee shall not exceed a limit of 373,737 tons of sand per twelve (12) consecutive month period in the sand handling operation, known as E-3-4.~~
- (b) A total of 6.66 tons per twelve (12) consecutive month period. Compliance with this limit shall be calculated by multiplying the tons of sand handled per twelve (12) month period by the value of (1-baghouse efficiency) then multiplying by one of the following:
- 1) the applicable EPA emission factor, currently 3.6 pounds of PM per ton of sand,
  - 2) a source specific emission factor established by stack testing,
  - 3) another emission factor accepted by the Commissioner

**Response 13:**

Indiana's Part 70 Operating Program approved by US EPA is a combined New Source Review (NSR) and Part 70 Operating Permit Program. This allows IDEM, OAQ to change NSR requirements through the Part 70 Operating Permit. See Response 8.

Conditions D.2.2(b)(1) and (2) have been retained in order to be able to verify compliance with the 3.16 ton per year emission limit. IDEM, OAQ requires a specific emission rate combined with an annual throughput limit. At a sand handling capacity of 50 tons per hour, the potential annual throughput of sand is 438,000 tons, which would result in PM emissions far in excess of the limit required with the current emission rate of 3.6 pounds of PM per ton of sand handled. RMG always has the option of stack testing the PM emission rate from this sand handling operation and requesting an increase in the throughput limit if a lower PM emission rate is substantiated by the stack test. If another emission factor is approved or determined through stack testing, RMG can request a modification to the Part 70 Operating Permit. Therefore, no change to Condition D.2.2 is required.

Similarly, Condition D.3.2(b)(2) regarding EU 3-4 has not been changed.

**Comment 14:**

As explained in the General Comments, the shakeout operation (EU 2-3) does not have an applicable emission limit and, therefore, testing of the emissions from a control device that it shares with another emission unit is not valid for determining the compliance of the other emission unit. If the

proposed limit for EU 2-3 were valid, the permit does not explain how two different limits could be applied to determine compliance from the same test.

Early in the permit review process, IDEM raised the question of the fate of emissions from emission units that did not vent to atmosphere. These units are enclosed in buildings such that the only way that these emissions can reach the atmosphere is as fugitive emissions through the building ventilation systems, generally, power roof ventilators. To demonstrate compliance with 326 IAC 6-1, RMG performed a series of calculations for each building. These calculations made the most extreme assumptions possible as to the quantity of emissions. All emission units were assumed to be at maximum production. All emissions were assumed to be emitted through the ventilation systems. Uncaptured emissions from emission units that had controls were also included. All of these calculations produced results that were below the 0.03 g/dscf limit for every building. The calculations were repeated assuming that the largest of the ventilation fans in each building was out of service. The results were still at or below the limit. RMG submitted these results assuming that they were sufficient to demonstrate that it would be impossible to violate the limit and that further proof of compliance would not be necessary. Apparently IDEM has chosen to worry about the close cases. Therefore, RMG presents the following additional arguments.

It is physically impossible for all of the emission units in any building to operate at their maximum capacity simultaneously. The ventilation systems are not powerful enough to remove all of the particulate generated from the building, as anyone who has been in the foundry can attest. This means that the emissions levels presented in the calculations could never actually occur.

On a practical level the testing that is proposed is impossible to accomplish. There is no methodology available for particulate testing of several roof ventilators simultaneously.

Finally, any emission from units that vent indoors and exhaust through the ventilation system would be subject to 326 IAC 6-4. RMG requests that this requirement be removed from the permit.

D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

~~(a) Within 36 months after issuance of this permit in order to demonstrate compliance with Conditions D.2.2 and D.2.3, the Permittee shall perform PM testing of the sand handling operation (EU 2-4) and the shakeout operation (EU 2-3) both exhausting through Stack 49 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~

~~(b) Within 36 months after issuance of this permit in order to demonstrate compliance with Condition D.2.3(d), the Permittee shall perform PM testing of the East Foundry main molding area general ventilation exhaust utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~

D.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) Within 36 months after issuance of this permit in order to demonstrate compliance with Condition D.3.2(b)(1), the Permittee shall perform PM testing of the sand handling operation (EU 3-4) exhausting through Stack 51 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

- ~~(b) Within 36 months after issuance of this permit in order to demonstrate compliance with Condition D.3.3(b), the Permittee shall perform PM testing of the South Foundry general ventilation exhaust utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~

**Response 14:**

Since Conditions D.2.2(a) and D.2.2(b)(1) have been retained, PM testing of the sand handling operation (EU 2-4) and the shakeout operation (EU 2-3) both exhausting through Stack 49 can and should be performed to show compliance with 326 IAC 6-1 and 326 IAC 2-2. The fact that two (2) emission units share the same control device, a baghouse, known as East Foundry B/H does not negate the fact that compliance with the applicable rules must be able to be proved by the source. Since the PSD thresholds must be verifiable via stack testing, the choices are to either separate the exhausts and add another control device or accept the more stringent requirement that the exhaust for both emission units must comply with 326 IAC 2-2. In addition, since the new sand silo, EU 2-6 also exhausts through Stack 49, this emission unit has been incorporated into the test Condition D.2.6.

Based on the conservative theoretical calculations presented in the TSD that showed compliance with 326 IAC 6-1 and the points made in the discussion above, IDEM, OAQ has deleted Conditions D.2.6(b) and D.3.8(b) (Now D.3.7(b) and EU 2-6 has been added to Condition D.2.6 as follows:

**D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

- ~~(a) Within 36 months after issuance of this permit in order to demonstrate compliance with Conditions D.2.2 and D.2.3, the Permittee shall perform PM testing of the shakeout operation (EU 2-3), the sand handling operation (EU 2-4) and the shakeout operation (EU 2-3) new sand silo (EU 2-6), both all exhausting through Stack 49 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~
- ~~(b) Within 36 months after issuance of this permit in order to demonstrate compliance with Condition D.2.3(d), the Permittee shall perform PM testing of the East Foundry main molding area general ventilation exhaust utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~

**D.3.78 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

- ~~(a) Within 36 months after issuance of this permit in order to demonstrate compliance with Condition D.3.2(b)(1), the Permittee shall perform PM testing of the sand handling operation (EU 3-4) exhausting through Stack 51 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~
- ~~(b) Within 36 months after issuance of this permit in order to demonstrate compliance with Condition D.3.3(b), the Permittee shall perform PM testing of the South Foundry general ventilation exhaust utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~

**Comment 15:**

The silos are used only during truck deliveries, about one hour, once or twice per week and it has no moving parts. RMG suggests that annual inspections are sufficient to assure proper operation of these units. The proposed frequency of inspection imposes an unwarranted burden on the Permittee. This comment applies to Condition D.2.11, D.3.13 and D.6.16.

See also the General Comment regarding Federal Enforcement of this permit condition.

**D.2.11 Filter Inspections**

~~Monthly~~ Annual inspections shall be performed to verify the placement, integrity and particle loading of the bin vent filter for the premix silo, known as EU 2-5. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

**D.3.13 Filter Inspections**

~~Monthly~~ Annual inspections shall be performed to verify the placement, integrity and particle loading of the bin vent filter for the premix silo, known as EU 3-6. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

**D.6.16 Filter Inspections**

~~Monthly~~ Annual inspections shall be performed to verify the placement, integrity and particle loading of the bin vent filters for the muller sand silo, known as EU 7-1, sand silo - Dept. 26 & 30, known as EU 7-6, sand silo - pepset/isoset, known as EU 7-7 and the individual bin vent filters associated with the conveying air for EU 7-4a, EU7-4b and EU 7-8. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Subsequently on January 31, 2003, the comment was supplemented with the recommendation to replace the filter inspections with compliance monitoring of visible emissions once per shift.

In addition on March 26, 2003, the comment was supplemented with the recommendation that the record keeping conditions should have the same wording as the visible emissions notations by adding the phrase, "when operating normally, during daylight hours" in Sections D.1, D.2, D.3, D.4, D.5, and D.6.

**Response 15:**

IDEM has determined that annual inspections are not adequate to assure the verification, placement, integrity and particle loading. If the filter is removed inadvertently during the first two (2) months of the annual cycle, the emission unit would operate without the filter for ten (10) months of the year. This is not acceptable. Due to the low emission rate and infrequent usage, IDEM, OAQ suggested relaxing its daily inspection schedule to a monthly frequency. However, this relaxation was rejected by the Permittee and the Permittee has agreed to accept visible emissions notations in lieu of the filter inspections. Therefore, Conditions D.2.11, D.3.13 and D.6.16 have been deleted. Conditions D.2.7, D.3.9 (now D.3.8) and D.6.15 have been revised to add the requirement for visible emission notations. In addition, the record keeping requirements for the inspections have been deleted and the record keeping of visible notations for these additional facilities have been incorporated into Conditions D.2.12 (now D.2.11), D.3.13 (now D.3.12) and D.6.17 (now D.6.16).

In addition, the record keeping conditions for visible emissions notations have been revised by adding the phrase, "when operating normally, during daylight hours" in Sections D.1, D.2, D.3, D.4, D.5, and D.6.

#### D.2.7 Visible Emissions Notations

- (a) Visible emission notations of the shakeout operation, known as EU 2-3, the sand handling operation, known as EU 2-4, and the new sand silo, known as EU 2-6, **Stack exhaust 49 as well as the premix silo, known as EU 2-5, Stack exhaust 15** shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.3.9 Visible Emissions Notations

- (a) Visible emission notations of the shakeout operation, known as EU 3-3, ~~and~~ the sand handling operation, known as EU 3-4 **and the premix silo, known as EU 3-6**, Stack exhausts 44, ~~and 51~~ **and 38** shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.6.15 Visible Emissions Notations

- (a) **Visible emission notations of the muller sand silo, known as EU 7-1, sand silo - Dept. 26 & 30, known as EU 7-6, sand silo - pepset/isoset, known as EU 7-7 Stack exhausts**

**11, 58A, and 58 and the individual bin vent filters associated with the conveying air for EU 7-4a, EU7-4b and EU 7-8 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.**

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.**
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.**
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.**
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.**

#### D.2.11 Filter Inspections

~~Monthly inspections shall be performed to verify the placement, integrity and particle loading of the bin vent filter for the premix silo, known as EU 2-5. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

#### D.3.13 Filter Inspections

~~Monthly inspections shall be performed to verify the placement, integrity and particle loading of the bin vent filter for the premix silo, known as EU 3-6. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

#### D.6.16 Filter Inspections

~~Monthly inspections shall be performed to verify the placement, integrity and particle loading of the bin vent filters for the muller sand silo, known as EU 7-1, sand silo - Dept. 26 & 30, known as EU 7-6, sand silo - pepset/isoset, known as EU 7-7 and the individual bin vent filters associated with the conveying air for EU 7-4a, EU7-4b and EU 7-8. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

#### D.1.11 Record Keeping Requirements

- (b) To document compliance with Condition D.1.7, the Permittee shall maintain records of visible emission notations of the Stack exhausts 47 and 50 once per shift **when operating normally, during daylight hours.****

D.2.12 Record Keeping Requirements

- (a) **To document compliance with Condition D.2.1, the Permittee shall maintain records of the total throughput of sand to the premix silo, known as EU 2-5, as well as to EU 3-6, EU 7-6 and EU 7-7 on a monthly basis.**
- (ba) To document compliance with Condition D.2.2(b)(2), the Permittee shall maintain records of the throughput of sand in the sand handling system, known as EU 2-4 on a monthly basis.
- (cb) To document compliance with Condition D.2.7, the Permittee shall maintain records of visible emission notations of the Stack exhausts 49 **and 15** once per shift **when operating normally, during daylight hours.**
- (de) To document compliance with Condition D.2.8, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.
- (ed) To document compliance with Condition D.2.9, the Permittee shall maintain records of the results of the inspections required under Condition D.2.9 and the dates the vents are redirected.
- ~~(fe) To document compliance with Condition D.2.11, the Permittee shall maintain records of the results of the inspections required under Condition D.2.11.~~
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.14 Record Keeping Requirements

- (a) **To document compliance with Condition D.3.1(c), the Permittee shall maintain records of the total throughput of sand to the premix silo, known as EU 3-6, as well as to EU 2-5, EU 7-6 and EU 7-7 on a monthly basis.**
- (ba) To document compliance with Condition D.3.2(b)(2)(B), the Permittee shall maintain records of the throughput of sand in the sand handling system, known as EU 3-4 on a monthly basis.
- (cb) To document compliance with Condition D.3.4, the Permittee shall maintain records of the iron castings throughput to the shakeout operation, known as EU 3-3 on a monthly basis.
- (de) To document compliance with Condition D.3.8, the Permittee shall maintain records of visible emission notations of the Stack exhausts 44, ~~and 51~~ **and 38** once per shift **when operating normally, during daylight hours.**
- (ed) To document compliance with Condition D.3.9, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.
- (fe) To document compliance with Condition D.3.10, the Permittee shall maintain records of the results of the inspections required under Condition D.3.10 and the dates the vents are redirected.
- ~~(f) To document compliance with Condition D.3.12, the Permittee shall maintain records of the results of the inspections required under Condition D.3.12.~~

- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.4.10 Record Keeping Requirements

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- (b) To document compliance with Condition D.4.6, the Permittee shall maintain records of visible emission notations of the Stack exhaust 46 once per shift **when operating normally, during daylight hours.**

#### D.5.18 Record Keeping Requirements

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- (c) To document compliance with Condition D.5.11, the Permittee shall maintain records of visible emission notations of the Stack exhausts 43, 42, 5 and 45 once per shift **when operating normally, during daylight hours.**

#### D.6.17 Record Keeping Requirements

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- (a) To document compliance with Condition D.6.1(b), the Permittee shall maintain records of the total throughput of sand to the sand silo - Dept. 26 & 30 (South and Middle Foundries), known as EU 7-6, the sand silo - pepset/isoset, known as EU 7-7, as well as to EU 2-5 and EU 3-6 on a monthly basis.**
- (ba) To document compliance with Conditions D.6.2(a) and D.6.2(b), the Permittee shall maintain records of the amount of each resin and **the** VOC content of each resin **in order to determine the VOC** delivered to the two (2) Shalco core machines, known as EU 7-8, the Laempe LL 30 core machine, known as EU 7-4b and the iso-set core-making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, on a monthly basis.
- (cb) To document compliance with Condition D.6.3, the Permittee shall maintain records of the amount of each resin and **the** VOC content of each resin **in order to determine the VOC** delivered to the pep-set core making process, known as EU 7-5, consisting of two (2) Palmer core machines, on a monthly basis.
- (de) To document compliance with Condition D.6.11, the Permittee shall maintain the records of the pH of the scrubber liquor used in conjunction with the iso-set core making process consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines once per shift.
- (ed) To document compliance with Condition D.6.12, the Permittee shall maintain the records of the status of the flow switches used in conjunction with two (2) scrubbers controlling SO<sub>2</sub> emissions from the iso-set core making process, consisting of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines once per month.
- (fe) To document compliance with Conditions D.6.13 ~~and D.6.15~~, the Permittee shall maintain records of the results of the inspections required under Conditions D.6.13 ~~and D.6.15~~.
- (g) To document compliance with Condition D.6.15, the Permittee shall maintain records of visible emission notations of the Stack exhausts 11, 58A, and 58 and the individual bin vent filters associated with the conveying air for EU 7-4a, EU7-4b and EU 7-8 once per shift when operating normally, during daylight hours.**
- (hf) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Comment 16:**

This section below should be deleted. As noted on page 27 of 47 of the TSD, EU 3-3 consists of two units identical in capacity. The first was built prior to 1970. The second, constructed in 1979, has potential to emit (PTE) VOC of 22.35 tons per year. Because the PTE is below 40 tons per year, the unit was never subject to 326 IAC 2-3, and this section is inappropriate because 326 IAC 2-3 is not and never was an "applicable requirement" for either of the units.

~~D.3.5 VOC [326 IAC 2-3]~~

~~The throughput of iron castings to the shakeout operation, known as EU 3-3, shall be limited to less than 66,666 tons per twelve (12) consecutive month period and VOC emissions shall not exceed 1.20 pounds per ton of casting, equivalent to VOC emissions of less than forty (40.0) tons per year in order to make the requirements of 326 IAC 2-3 not applicable.~~

**Response 16:**

The one (1) shakeout operation, known as EU 3-3 (also known as point 34P) consists of two (2) shakeout units exhausting to Stack 44. The combined potential-to-emit volatile organic compounds (VOC) for the shakeout operation is 44.7 tons per year. In order to ensure that the PSD emission offset level of forty (40) tons per year for the second shakeout unit is not exceeded and to allow IDEM, OAQ to stack test the emission rate, if desired, IDEM, OAQ has assigned an emission limit to the Stack 44 exhaust. This exhaust is also shared with the first shakeout unit, but the emissions from the first unit are indistinguishable from the second. Therefore, no change to Condition D.3.5 has been made.

**Comment 17:**

In creating the Clean Air Act Amendments, Congress mandated, and the courts have upheld, that no new requirements or restrictions shall be created by a Title V permit. The proposed applicable requirements for these emission units create entirely new limits that are not supported by any regulation. RMG requests that the conditions of the permit be modified to reflect the proper PSD limits as shown. Specifically, it is not proper to combine the emissions of the five emission units that are controlled by the Middle Foundry Baghouse because two of the emission units do not have PSD limits. Combining the units in this way gives the unregulated units defacto PSD limits based on assumed emission rates. Further the emission factor that was developed assumed 8,760 hours per year of operation, which improperly limits the Permittee's options for achieving compliance.

The PSD limits for EU 4-1 and EU 4-7 were also calculated without including the net emissions from previous years of operation. The values shown have been adjusted by adding these emissions to the 15 ton per year PSD limit.

~~D.4.2 Particulate Matter (PM) [326 IAC 2-2]~~

~~(a) In order to render the requirements of 326 IAC 2-2 not applicable for the Hunter molding, pouring and cooling line, known as EU 4-1, the Sinto molding and cooling line, known as EU 4-2b and the Sinto molding, pouring and cooling line, known as EU 4-7:~~

- (1) To comply with 326 IAC 6-1, The the particulate matter (PM) emissions rate from the Middle Foundry baghouse Stack 46 shall not exceed 0.03 grains per dry standard cubic foot of outlet air, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute, and which is less that 25 tons per year, rendering 326 IAC 2-2 not applicable.

- (2) ~~The PM<sub>10</sub> emissions rate from the Middle Foundry baghouse Stack 46 shall not exceed 0.025 grains per dry standard cubic foot of outlet air, equivalent to 8.67 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute.~~
- 2) The PM<sub>10</sub> emissions from the Hunter molding, pouring and cooling line, known as EU 4-1, shall not exceed 15.1 tons per year.
- (b) In order to render the requirements of 326 IAC 2-2 not applicable the ~~throughput of metal to emissions from~~ the Sinto molding, pouring and cooling line, known as EU 4-2a and EU 4-2b, shall be limited to ~~less than 26,683 tons per twelve (12) consecutive month period, equivalent to PM emissions of less than a total of 37.5 tons per year and equivalent to PM<sub>10</sub> emissions of less than a total of 18.4 tons per year, equivalent to 26,683 tons of throughput of iron based on the current EPA emission factors.~~
- (c) In order to render the requirements of 326 IAC 2-2 not applicable for the Sinto molding, pouring and cooling line, known as EU 4-7:
- 1) To comply with 326 IAC 6-1, the particulate matter (PM) emissions from the Middle Foundry baghouse Stack 46 shall not exceed 0.03 grains per dry standard cubic foot of outlet air, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute, which is less than 25 tons per year, rendering 326 IAC 2-2 not applicable.
- 2) The PM<sub>10</sub> emissions from the Sinto molding, pouring and cooling line, known as EU 4-7, shall not exceed 17.8 tons per year.

Subsequently on January 31, 2003, the comment was supplemented with the following recommended changes:

#### D.4.2 Particulate Matter (PM) [326 IAC 2-2]

- (a) In order to render the requirements of 326 IAC 2-2 not applicable for the Hunter molding, pouring and cooling line, known as EU 4-1, the Sinto molding and cooling line, known as EU 4-2b and the Sinto molding, pouring and cooling line, known as EU 4-7:
- (1) The particulate matter (PM) emission rate from the Middle Foundry baghouse Stack 46 shall not exceed 0.03 grains per dry standard cubic foot of outlet air, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute, and
- (2) The PM<sub>10</sub> emission rate from the Middle Foundry baghouse Stack 46 shall not exceed ~~0.025~~ 0.03 grains per dry standard cubic foot of outlet air, equivalent to ~~8.67~~ 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute.
- (b) In order to render the requirements of 326 IAC 2-2 not applicable the throughput of metal to the Sinto molding, pouring and cooling line, known as EU 4-2a and EU 4-2b, shall be limited to less than ~~26,683~~ 19,240 tons per twelve (12) consecutive month period, equivalent to PM emissions ~~from pouring~~ of less than a total of ~~37.5~~ 27.0 tons per year and equivalent to PM<sub>10</sub> emissions of less than a total of ~~18.4~~ 13.25 tons per year. Total PM emissions from the Sinto are limited to 37.5 tons per year and total PM<sub>10</sub> emissions are limited to 18.4 tons per year.

### Response 17:

Indiana's Part 70 Operating Program approved by US EPA is a combined New Source Review (NSR) and Part 70 Operating Permit Program. This allows IDEM, OAQ to change NSR requirements through the Part 70 Operating Permit. See Response 8.

As explained in the TSD on pages 26 and 27 of 47, EU 4-1, constructed in 2000, is limited to PM emissions of less than 5.70 pounds per hour, equivalent to less than twenty-five (25) tons per year to render the requirements of 326 IAC 2-2 not applicable. EU 4-1 exhausts to Stack 46. EU 4-7, constructed in 2001, is also limited to PM emissions of less than 5.70 pounds per hour, equivalent to less than twenty-five (25) tons per year to render the requirements of 326 IAC 2-2 not applicable. EU 4-7 also exhausts to Stack 46. The sum of the two (2) emissions totals less than 11.4 pounds per hour, equivalent to less than fifty (50) tons per year. But since additional emission units share Stack 46, the 0.03 grain loading limit, equivalent to 10.4 pounds per hour pursuant to 326 IAC 6-1 is more restrictive for Stack 46. Therefore, compliance with the grain loading limit of 0.03 grains per dry standard cubic foot (dscf) also renders the requirements of 326 IAC 2-2 not applicable for EU 4-1 and EU 4-7. Therefore Conditions D.4.2(a) and D.4.2(a)(1) have not been changed.

As stated in the TSD on page 27, the PM<sub>10</sub> emissions limits were previously determined as listed in the proposed permit in Condition D.4.2(a)(2) and D.4.2(b). Subsequently the source has requested that the PM<sub>10</sub> emission rates be revised for Stack 46 from 0.025 to 0.03 grains per dry standard cubic foot of outlet air with reduced throughput limited for EU 4-2a and EU 4-2b. The reduction in the throughput from 26,683 to 19,240 tons allows the PM<sub>10</sub> grain loading to increase from 0.025 to 0.03 grains per dry standard cubic foot of outlet air. Therefore Conditions D.4.2(a)(2) and 4.2(b) have been revised as shown. The total PM and PM<sub>10</sub> emission limitations of 37.5 and 18.4 tons per year remain the same. The suggested wording for in Condition D.4.2(c) has already been addressed in retaining Condition D.4.2(a). Also See Response 30 for the rationale for the change in the first paragraph of Condition D.4.2(a)

#### D.4.2 Particulate Matter (PM) [326 IAC 2-2]

- (a) In order to render the requirements of 326 IAC 2-2 not applicable for **emissions from the Hunter molding, pouring and cooling line operations**, known as EU 4-1, the Sinto ~~molding and-cooling line operation~~, known as EU 4-2b and the Sinto ~~molding, pouring and cooling line operation~~, known as EU 4-7:
- (1) The particulate matter (PM) emission rate from the Middle Foundry baghouse Stack 46 shall not exceed 0.03 grains per dry standard cubic foot of outlet air, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute, and
  - (2) The PM<sub>10</sub> emission rate from the Middle Foundry baghouse Stack 46 shall not exceed ~~0.025~~ **0.03** grains per dry standard cubic foot of outlet air, equivalent to ~~8.67~~ **10.4** pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute.
- (b) In order to render the requirements of 326 IAC 2-2 not applicable the throughput of metal to the Sinto molding, pouring and cooling line, known as EU 4-2a and EU 4-2b, shall be limited to less than ~~26,683~~ **19,240** tons per twelve (12) consecutive month period **with compliance determined at the end of each month**, equivalent to PM emissions **from pouring** of less than a total of ~~37.5~~ **27.0** tons per year and equivalent to PM<sub>10</sub> emissions of less than a total of ~~48.4~~ **13.25** tons per year. **Total PM emissions from the Sinto are limited to 37.5 tons per year and total PM<sub>10</sub> emissions are limited to 18.4 tons per year.**

In addition the Quarterly Report Form has been similarly revised.

**Comment 18:**

As discussed above, there is no applicable limit for  $PM_{10}$  for this stack because there are two units exhausting through this stack that are not subject to  $PM_{10}$  limits.

**D.4.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

Within 180 days after issuance of this permit in order to demonstrate compliance with Conditions D.4.1 and D.4.2, the Permittee shall perform  $PM$  and  $PM_{10}$  testing of the Middle Foundry baghouse exhaust, Stack 46, controlling emissions from Hunter molding, pouring and cooling line, known as EU 4-1, Sinto molding and cooling line, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto molding, pouring and cooling line, known as EU 4-7, as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.  ~~$PM_{10}$  includes filterable and condensable  $PM_{10}$ .~~ Testing shall be conducted in accordance with Section C- Performance Testing. All associated facilities exhausting to a single stack shall be operating when determining compliance with the overall limits.

The proposed permit includes a requirement for visual observation of stacks on all shifts during daylight hours. RMG feels that this requirement is excessive. Daily observations are sufficient to protect the environment. Baghouses seldom fail suddenly. The incremental benefit of making observations three times per day rather than once a day is very small in terms of possible prevention of emissions. However, the incremental cost in manpower and paperwork is significant. Three shift observations also create logistical and safety issues as described below.

Obviously, there is not sufficient daylight available year round to make observations on a three-shift basis. At those times of the year when the available daylight is marginal, weather will also be a factor in how much daylight is available. The window of time available for making observations is also smaller on the early and late shifts. Judgment will frequently be involved in determining whether a valid observation can be made. This raises a question as to the enforceability of the permit condition.

Three shift observations will involve at least three different observers. Since any negative observations must be corrected immediately, the only information available to each observer will be that the previous reports were positive. Each observer's only point of reference in determining degradation of baghouse performance will be his own previous day's observations. Thus, these additional daily observations will not improve the response time to a possible problem unless it is catastrophic in nature, which is very unlikely.

Physically making the observations early and late in the day is also a problem. The majority of the stacks cannot be observed from the ground because of the size and location of the buildings relative to the stacks. The roof of the warehouse building is south of all of the stacks and provides a good place to take midday observations. However, this location is not acceptable for making observations on some stacks in the early morning or in the evening because of the relative position of the sun. Reaching acceptable observation points at these times will require traversing the roofs of various buildings. During inclement weather this can be dangerous.

RMG requests that the requirement for visual observations on each shift be changed to daily visual observations. The slight possibility of a potential environmental benefit does not justify tripling the cost of complying plus the many logistical problems that must be overcome to accomplish compliance safely.

## Response 18

The comment regarding visible emissions observations has been raised in Comment 10 and responded to in Response 10 of this document.

Since the PM<sub>10</sub> emission limit in Condition D.4.2(a)(2) has been retained. Condition D.4.5 has been revised to clarify that the testing is required to show compliance with Condition D.4.1(a) which lists the grain loading limit for Stack 46. Testing will not be required for the general ventilation exhausts. Condition D.4.5 is revised as follows:

### D.4.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 180 days after issuance of this permit in order to demonstrate compliance with Conditions D.4.1(a) and D.4.2, the Permittee shall perform PM and PM<sub>10</sub> testing of the Middle Foundry bag-house exhaust, Stack 46,controlling emissions from Hunter molding, pouring and cooling line, known as EU 4-1, Sinto molding and cooling line, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto molding, pouring and cooling line, known as EU 4-7, as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing. All associated facilities exhausting to a single stack shall be operating when determining compliance with the overall limits.

## Comment 19:

In creating the Clean Air Act Amendments, Congress mandated, and the courts have upheld, that no new requirements or restrictions shall be created by a Title V permit. The proposed applicable requirements for this emission unit create entirely new limits that are not supported by any regulation. RMG appreciates its responsibility to demonstrate compliance with applicable requirements, but the conditions added here severely limit its options for doing so. RMG requests that the conditions of the permit be modified to reflect the proper PSD limit as shown.

### D.5.1 PSD Minor Limit [326 IAC 2-2]

(a) Pursuant CP 141-4010-00007, issued August 30, 1995:

- (1) The PM emissions from the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, shall be limited to 2.26 pounds per hour. Therefore, the requirements of 326 IAC 2-2 do not apply.
  - (2) The PM<sub>10</sub> emissions from the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, shall not ~~exceed 3.42 pounds per hour~~ 15 tons per year. Therefore, the requirements of 326 IAC 2-2 do not apply.
  - (3) The opacity from the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, shall not exceed ten percent (10%) for any six (6) minute average (24 readings taken in accordance with EPA Method 9, Appendix A). **Compliance with** ~~t~~This opacity limit shall also satisfy the opacity requirements of 326 IAC 5-1-2.
- (b) The PM emissions from the rail blast mechanical blaster, known as EU 5-1, ~~shall be limited to less than 5.70 pounds per hour~~ are limited to 5.5 tons per year by 326 IAC 6-1-18. Therefore, the requirements of 326 IAC 2-2 do not apply.

- (c) The PM<sub>10</sub> emissions from the rail blast mechanical blaster, known as EU 5-1, shall be limited to less than ~~3.42 pounds per hour~~ 15 tons per year. Therefore, the requirements of 326 IAC 2-2 do not apply.

**Response 19:**

Indiana's Part 70 Operating Program approved by U.S. EPA is a combined New Source Review (NSR) and Part 70 Operating Permit Program. This allows IDEM, OAQ to change NSR requirements through the Part 70 Operating Permit. See Response 8.

IDEM, OAQ requires that the PM<sub>10</sub> emission limits be verifiable so that the requirements of 326 IAC 2-2 are not applicable. A ton per year PM<sub>10</sub> emission limit of fifteen (15) tons per year can not be verified via stack testing. Therefore, Conditions D.5.1(a)(2) and D.5.1(c) have been retained and no changes to the proposed permit are required.

Although compliance with 326 IAC 6-1-18 also would show compliance with the PM emission limit for EU 5-1 to render the requirement of 326 IAC 2-2 not applicable, IDEM, OAQ has incorporated each limit separately. Therefore, no change to the proposed Condition D.5.1(b) is required.

**Comment 20:**

See the Comment 28 for General Comments on 326 IAC 6-1-2.

**D.5.5 Particulate Matter (PM) [326 IAC 6-1]**

- ~~(a) Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from booths 8 and 9 of EU 5-3, equipped with a cyclone, shall not exceed 0.03 grains per dry standard cubic foot of outlet air exhausted to Stack 16A, equivalent to 0.386 pounds per hour at a flow rate of 1,500 dry standard cubic feet per minute.~~
- ~~(b) Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from booths 10 and 11 of EU 5-3, equipped with a Torit baghouse, shall not exceed 0.03 grains per dry standard cubic foot of outlet air exhausted to Stack 16, equivalent to 0.771 pounds per hour at a flow rate of 3,000 dry standard cubic feet per minute.~~

**Response 20:**

IDEM, OAQ has determined that 326 IAC 6-1 is applicable to all facilities at a source since the potential to emit PM of the entire source is greater than one hundred (100) tons per year. Therefore, Condition D.5.5 has been retained since Stacks 16 and 16A are subject to the requirements of 326 IAC 6-1. Also see Response 9.

**Comment 21:**

RMG suggests the changes below because this equipment is only used intermittently. Weekly inspections are redundant with monthly inspections and not justified by the level of use.

See also the General Comment regarding Federal Enforcement of this permit condition.

**D.5.17 Monitoring**

- ~~(a) Daily At the beginning of each shift that the foundry spray booth, known as EU 5-2, is used, inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of~~

~~the overspray from the foundry paint booth, known as EU 5-2, stack 100 while the paint booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

#### Response 21:

IDEM, OAQ has incorporated the change from daily to the beginning of each shift in Condition D.5.17(a) as follows:

#### D.5.17 Monitoring

- (a) ~~Daily~~ **At the beginning of each shift that the foundry spray booth, known as EU 5-2, is used**, inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the foundry paint booth, known as EU 5-2, stack 100 while the paint booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The requirement to do weekly observations of the PM overspray is not redundant with the requirement to perform monthly inspections of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The weekly inspections require observation of the stack exhaust, while the monthly inspections require physically looking on the rooftops and ground for the presence of overspray.

#### Comment 22:

Section D.5.6 imposes a VOC limit based upon the pounds of VOC per gallon of coating, less water. A log of dates of use and daily usage records are meaningless in monitoring compliance with this limit, which can be calculated from MSDS and inventory data.

#### D.5.18 Record Keeping Requirements

- (a) To document compliance with Condition D.5.6, the Permittee shall maintain records ~~in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC content limits established in Condition D.5.6 of~~
  - (1) ~~the amount and VOC content of each coating material and solvent used.~~  
Records shall include purchase orders, invoices, and material safety data sheets

(MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents; and

~~(2) — A log of the dates of use.~~

**Response 22:**

The VOC content limit specified in Condition D.5.6 (now D.5.4) pursuant to 326 IAC 8-2-9 is 3.5 pounds of VOCs per gallon of coating less water, as delivered to the applicator for any calendar day, for extreme performance coatings. Inventory data for any time period greater than a day, will not when combined with the MSDS show compliance unless all paints are not thinned and/or all paints comply with the rule. Presently, a volume weighted average was not required in the proposed permit because all paints in the application comply with the rule. If at some time in the future, a paint has a VOC content greater than 3.5 pounds of VOCs per gallon of coating less water, then the log of the dates of use and amount and VOC content of each paint would be required to show compliance on a daily volume weighted average basis. In order to allow an IDEM inspector to determine compliance, a log is required so that if by chance a paint is used with above 3.5 pounds of VOCs per gallon of coating less water according to the MSDS, then compliance could be determined from the records. Therefore, the requirement to keep the log of the dates of use has been retained, but only when using a daily volume-weighted average to show compliance. Condition D.5.18 has been revised as follows:

**D.5.18 Record Keeping Requirements**

- (a) To document compliance with Condition D.5.64, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC content limits established in Condition D.5.64.
- (1) ~~The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents; and~~
- (2) **A log of the dates of use if compliance is based on a daily volume weighted average. The amount of coating material and solvent less water used on daily basis when necessary to calculate the volume weighted VOC content of the coatings used for each day.**
- (A) **Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.**
- (B) **Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.**

**Comment 23:**

RMG never agreed to combine the emission limits for the Gaylord core machines EU 7-4a with the Laempe and Shalco core machines EU 7-4b and 7-8. These installations were more than twenty years apart and there is no regulatory basis for combining them under a single PSD limit.

In creating the Clean Air Act Amendments, Congress mandated, and the courts have upheld, that no new requirements or restrictions shall be created by a Title V permit. The proposed applicable

requirements for these emission units create entirely new limits that are not supported by any regulation. RMG requests that the conditions of the permit be modified to reflect the proper PSD limits as shown. Specifically, the proposed wording limits the amount and type of resins that can be used when only the total amount of VOC per year is regulated.

D.6.2 VOC [326 IAC 8-1-6] [326 IAC 2-2]

- ~~(a) The amount of resins delivered to two (2) Shalco core machines, known as EU 7-8, the Laempe core machine, known as EU 7-4b, and the iso-set core making process, consisting of four (4) Gaylord core machines, EU 7-4a shall be limited to less than a total of 250 tons per twelve (12) consecutive month period, and shall not exceed a VOC content of 200 pounds of VOC per ton of resin.~~
- (a) The VOC content of resins delivered to two (2) Shalco core machines, known as EU 7-8, the Laempe core machine, known as EU 7-4b, is limited to less than a total of twenty-five (25) tons of VOC per year. Compliance with these limits renders the requirements of 326 IAC 8-1-6 not applicable. Compliance with these limits also makes the requirements of 326 IAC 2-2 not applicable.
- ~~(b) This total resin usage limit combined with the VOC content limit of the resins is equivalent to less than a total of twenty-five (25) tons of VOC per year. Compliance with these limits renders the requirements of 326 IAC 8-1-6 not applicable. Compliance with these limits also makes the requirements of 326 IAC 2-2 not applicable.~~
- (b) The VOC content of resins delivered to four Gaylord core machines, known as EU 7-4a, is limited to less than a total of twenty-five (25) tons of VOC per year. Compliance with these limits renders the requirements of 326 IAC 8-1-6 not applicable. Compliance with these limits also makes the requirements of 326 IAC 2-2 not applicable.
- (c) The requirements from SSM 141-12444-00007, issued October 16, 2000 and SSM 141-14439-00007, issued September 12, 2001 that limited the throughput of sand to the iso-set core machine, known as EU 7-4b and two (2) Shalco core machines, known EU 7-8, to less than a total of 17,858 tons per twelve (12) consecutive month period coupled with a VOC emission factor not to exceed 2.80 pounds per ton of sand handled, equivalent to VOC emissions of less than twenty-five (25) tons per year in order to make the requirements of 326 IAC 8-1-6 not applicable. This condition has been replaced by the limit on the amount and of VOC in content of the resins.

**Response 23:**

Indiana's Part 70 Operating Program approved by U.S. EPA is a combined New Source Review (NSR) and Part 70 Operating Permit Program. This allows IDEM, OAQ to change NSR requirements through the Part 70 Operating Permit. See Response 8.

Since EU 7-4a was constructed in 1979, 326 IAC 8-1-6 is not applicable to this emission unit. However, in order to make the requirements of 326 IAC 2-3, not applicable in 1979, the source should have had an emission limit of less than forty (40) tons per year. EU 7-4b and EU 7-8 have been combined in terms of emission limits and the RMG has agreed that they should have been combined pursuant to SSM 141-12444-00007, issued October 16, 2000 and SSM 141-14439-00007, issued September 12, 2001. Therefore, Condition D.6.2(a) has been revised and a new condition has been added to separate the VOC emission limit for EU 7-4a as follows. The Quarterly Report forms have also been revised to reflect the separate VOC emission limits.

In addition, Condition D.6.2(c) has been deleted since the change in old permit conditions is discussed in the TSD and IDEM, OAQ no longer requires rescinded or replaced conditions to be noted in the Part 70 Operating Permit.

D.6.2 VOC [326 IAC 8-1-6] [326 IAC 2-2] [326 IAC 2-3]

- (a) ~~The VOC amount of resins delivered to two (2) Shalco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, and the iso-set core making process, consisting of four (4) Gaylord core machines, EU 7-4a shall be limited to less than a total of 250 tons per twelve (12) consecutive month period, and shall not exceed a VOC content of 200 pounds of VOC per ton of resin twenty-five (25) tons of VOC per twelve (12) consecutive month period with compliance determined at the end of each month.~~
- (b) ~~This total resin usage limit combined with the VOC content limit of the resins is equivalent to less than a total of twenty-five (25) tons of VOC per year. Compliance with these limits renders the requirements of 326 IAC 8-1-6 not applicable. Compliance with these limits also makes the requirements of 326 IAC 2-2 not applicable.~~
- (b) The VOC delivered to the iso-set core making process, consisting of four (4) Gaylord core machines, EU 7-4a shall be limited to less than a total of forty (40) tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit makes the requirements of 326 IAC 2-3 not applicable.**
- (c) ~~The requirements from SSM 141-12444-00007, issued October 16, 2000 and SSM 141-14439-00007, issued September 12, 2001 that limited the throughput of sand to the iso-set core machine, known as EU 7-4b and two (2) Shalco core machines, known EU 7-8, to less than a total of 17,858 tons per twelve (12) consecutive month period coupled with a VOC emission factor not to exceed 2.80 pounds per ton of sand handled, equivalent to VOC emissions of less than twenty-five (25) tons per year in order to make the requirements of 326 IAC 8-1-6 not applicable. This condition has been replaced by the limit on the amount and content of the resins:~~

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facilities: Laempe (EU 7-4b) **and** Two (2) Shalco Core Machines (EU 7-8) **and** Four (4) ~~Gaylord Core Machines (EU 7-4a)~~  
 Parameter: **VOC Amount of Resin Delivered to the Core Machines (VOC delivered is the sum of the product of the VOC content of each resin times the amount of that resin used)**  
 Limit: Less than ~~250 tons of resin~~ **a total of twenty-five (25) tons of VOC** per twelve (12) consecutive month period **with compliance determined at the end of each month**, equivalent to less than twenty-five (25) tons of VOC per year.

YEAR: \_\_\_\_\_

Month	VOC Delivered Amount of Resin (tons)	VOC Delivered Amount of Resin (tons)	VOC Delivered Amount of Resin (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

**Source Name:** RMG Foundry, LLC d/b/a RMG Foundry  
**Source Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Mailing Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Part 70 Permit No.:** T 141-6087-00007  
**Facilities:** Four (4) Gaylord Core Machines (EU 7-4a)  
**Parameter:** VOC Delivered to the Core Machines (VOC delivered is the sum of the product of the VOC content of each resin times the amount of that resin used)  
**Limit:** Less than a total of forty (40) tons of VOC per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: \_\_\_\_\_

Month	VOC Delivered (tons)	VOC Delivered (tons)	VOC Delivered (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**Attach a signed certification to complete this report**

**Comment 24:**

In creating the Clean Air Act Amendments, Congress mandated, and the courts have upheld, that no new requirements or restrictions shall be created by a Title V permit. The proposed applicable requirements for these emission units create entirely new limits that are not supported by any regulation. RMG requests that the conditions of the permit be modified to reflect the proper PSD limit as shown. Specifically, the proposed wording limits the amount and type of resins that can be used when only the total amount of VOC per year is regulated.

D.6.3 Volatile Organic Compounds (VOCS) [326 IAC 2-2] [326 IAC 8-1-6]

(a) ~~The amount of VOC content of the resins delivered to pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines shall be limited by the following equation, such that the total VOC delivered to the pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines is to less than twenty-five (25) tons per twelve (12) consecutive month period.~~

~~Less than 25 tons of VOC per year = Less than 0.490 \* Amount of Resin #1 (tons/yr) + 0.390 \* Amount of Resin #2 (tons/yr) + 0.750 \* Amount of Resin #3 (tons/yr)~~

~~(b) The VOC content of the three (3) resins shall not exceed the following:~~

~~(1) 980 pounds per ton of resin #1;~~

~~(2) 780 pounds per ton of resin #2, and~~

~~(3) 1,500 pounds per ton of resin #3.~~

(c) Compliance with these limits makes the requirements of 326 IAC 2-2 and 326 IAC 8-1-6 not applicable.

**Response 24:**

The Part 70 Operating Program approved by U.S. EPA is a combined New Source Review (NSR) and Part 70 Operating Permit Program. This allows IDEM, OAQ to change NSR requirements through the Part 70 Operating Permit. See Response 8.

In order to show compliance with the twenty-five (25) tons per year VOC emission limit, IDEM, OAQ requires that the VOC delivered to the core machines be calculated by the sum of the product of the VOC content of each resins times the amount of that resin used. The use of VOC delivered is similar to that required by IDEM, OAQ for surface coating operations. Therefore, the suggested wording has modified and incorporated into Condition D.6.3 and the corresponding Quarterly Report Forms have been changed as follows:

D.6.3 Volatile Organic Compounds (VOCs) [326 IAC 2-2] [326 IAC 8-1-6]

(a) The amount of **VOC resins** delivered to **the** pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines shall be limited ~~by the following equation, such that the total VOC delivered to the pep-set core-making process, known as EU 7-5, consisting of two (2) Palmer core machines is to less than twenty-five (25) tons per twelve (12) consecutive month period~~ **with compliance determined at the end of each month.**

~~Less than 25 tons of VOC per year = Less than 0.490 \* Amount of Resin #1 (tons/yr) + 0.390 \* Amount of Resin #2 (tons/yr) + 0.750 \* Amount of Resin #3 (tons/yr)~~

~~(b) The VOC content of the three (3) resins shall not exceed the following:~~

~~(1) 980 pounds per ton of resin #1;~~

~~(2) 780 pounds per ton of resin #2, and~~

~~(3) 1,500 pounds per ton of resin #3.~~

**(be)** Compliance with ~~this these~~ limits makes the requirements of 326 IAC 2-2 and 326 IAC 8-1-6 not applicable.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
 Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
 Part 70 Permit No.: T 141-6087-00007  
 Facility: Pep-Set Core-Making Process (EU 7-5)  
 Parameter: **VOC** Amount of resins delivered to the applicators of the pep-set core making process (**VOC delivered is the sum of the product of the VOC content of each resin times the amount of that resin used**)  
 Limit: ~~Less than 0.490 \* Amount of Resin #1 (tons/yr) + 0.390 \* Amount of Resin #2 (tons/yr) + 0.750 \* Amount of Resin #3 (tons/yr), equivalent to~~ Less than twenty-five (25) tons of VOC per twelve (12) consecutive month period **with compliance determined at the end of each month.**

YEAR: \_\_\_\_\_

Month	Amount of Resin (tons)			Amount of Resin (tons)			Total Amount of Resin (tons)	Total Equivalent VOC (tons)
	This Month			Previous 11 Months				
	#1	#2	#3	#1	#2	#3	12 Month Total	

Month	VOC Delivered (tons)	VOC Delivered (tons)	VOC Delivered (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.  
 9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**Comment 25:**

RMG objects to making this certification because it is redundant. The permit application states that these boilers are natural gas fired only. The permit states that they are natural gas fired only. The permit has a condition that the boilers burn only natural gas. The permittee is required to certify compliance with each permit condition annually. There is no point in continually certifying something that cannot change.

See also the General Comment regarding Federal Enforcement of this permit condition.

~~D.6.19 Natural Gas Fired Boiler Certification~~

- ~~(a) The Permittee shall submit a certification, signed by the responsible official, that certifies all of the fuels combusted during the period. The natural gas-fired boiler certification does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34);~~
- ~~(b) The natural gas boiler certification shall be submitted to the address listed in Section C- General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the six (6) month period being reported.~~

**Response 25:**

IDEM, OAQ acknowledges that the application contained, the equipment list describes and Condition D.6.6 (now D.6.5) limits the two (2) boilers, known as EU 10-1 and EU 10-2, respectively, installed in 1968, rated at 16.4 million British thermal units per hour each, to fire only natural gas. Since these boilers can only burn natural gas, IDEM, OAQ has deleted Condition D.6.19 and the Semi-Annual Natural Gas-Fired Boiler Certification as follows:

~~D.6.19 Natural Gas Fired Boiler Certification~~

- ~~(a) The Permittee shall submit a certification, signed by the responsible official, that certifies all of the fuels combusted during the period. The natural gas-fired boiler certification does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34);~~
- ~~(b) The natural gas boiler certification shall be submitted to the address listed in Section C- General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the six (6) month period being reported.~~

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
SEMI-ANNUAL NATURAL GAS-FIRED BOILER CERTIFICATION**

Source Name: \_\_\_\_\_ RMG Foundry, LLC d/b/a RMG Foundry  
Source Address: \_\_\_\_\_ 500 South Union Street, Mishawaka, Indiana 46544  
Mailing Address: \_\_\_\_\_ 500 South Union Street, Mishawaka, Indiana 46544  
Part 70 Permit No.: \_\_\_\_\_ T 141-6087-00007

<p>9 _____ Natural Gas Only 9 _____ Alternate Fuel burned From: _____ To: _____</p>
---

<p>I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.</p>
<p>Signature:</p>
<p>Printed Name:</p>
<p>Title/Position:</p>
<p>Phone:</p>
<p>Date:</p>

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

**Comment 26:**

The following permit condition should be removed because it is not based on any applicable requirement. While it is the intent in a powder coating system to reuse powder whenever possible, if it becomes contaminated, it cannot be reused.

**D.7.2 Particulate Matter (PM)**

Pursuant to CP 141-5749-00007, issued July 17, 1996, the dry filters shall be in operation at all times when the powder coating is in operation. ~~The powder recovered from the filters shall be reused.~~

**Response 26:**

IDEM, OAQ acknowledges RMG Foundry's concern to reuse powder whenever possible, but not if it becomes contaminated. The dry filters have been previously determined to be integral to the process in CP 141-5749-00007, issued July 17, 1996, and RMG Foundry has again substantiated to IDEM, OAQ's satisfaction that the control is integral. Therefore, Condition D.7.2 (now D.7.3) has been revised to delete the last sentence as follows:

**D.7.2 Particulate Matter (PM)**

Pursuant to CP 141-5749-00007, issued July 17, 1996, the dry filters shall be in operation at all times when the powder coating is in operation. ~~The powder recovered from the filters shall be reused.~~

**Comment 27:**

**General Comments - RMG Foundry**

**Nonapplicability of 326 IAC § 6-1-2.**

326 IAC § 6-1-1(a) states that sources or facilities located in St. Joseph County shall comply with the limitations in Rule 6-1-18 if the source or facility is specifically listed in that section or "the limitations of section 2 of this rule, if the source or facility is not specifically listed in [section 18] of this rule, but has the potential to emit one hundred (100) tons or more, or has actual emissions of ten (10) tons or more, of particulate matter per year." The rule specifically uses the phrase "source or facility." The RMG "source" is specifically listed in 326 IAC § 6-1-18 (under the name "Reliance Electric-Dodge Division"). Six of its "facilities" are also listed. Because the "source" is listed, the "source" cannot be subject to 326 IAC § 6-1-2. Only "facilities" not listed in § 6-1-18 can be subject to § 6-1-2. And, in order to be so subject, each such facility must meet the applicability threshold of PM PTE of 100 tpy or actual emissions of 10 tpy or more. The draft permit proposes to impose a PM limit of 0.03 g/dscf on the following facilities at RMG:

EU	Description	Condition
1-4	scrap preheater	D.1.3 (a)
2-3	shakeout	D.2.3(a)
2-5	pre-mix silo	D.2.3(b)
2-6	sand silo	D.2.3(c)
2-7	floor molding, pouring, cooling	D.2.3(e)
3-5	sand bin/hopper	D.3.3(b)
3-6	pre-mix silo	D.3.3(a)
4-5	sand bin/hopper	D.4.1(b)
5-3	grinding booths	D.5.5(a)&(b)
7-1	Muller sand silo	D.6.4(a)
7-4	Laempe LL30 core machine	D.6.4(d)
7-5	pep-set core machine	D.6.4(c)&(d)
7-6	sand silo	D.6.4(b)
7-7	sand silo	D.6.4(c)

These units have PM PTE less than 100 tpy and actual emissions less than 10 tpy, and are therefore not subject to 326 IAC § 6-1-2. Rule 6-1-2 was never intended to be applied to insignificant units. The referenced permit conditions, and all associated monitoring, record keeping and reporting requirements, should be deleted or modified accordingly. In addition, there should be a section added to the permit to the effect that 326 IAC § 6-1-2 is not applicable to these units.

**Response 27:**

RMG Foundry acknowledges that certain facilities at the source are specifically cited in 326 IAC 6-1-18 and subject to the emission limitations specified in the rule.

The applicability of 326 IAC 6-1-2 states that sources or facilities located in St. Joseph County shall comply with (1) the limitations in Section 8.1 through 18 of this rule; or (2) the limitations of section 2 of this rule, **if the source or facility is not specifically listed** (emphasis added) in Sections 8.1 through 18 of this rule, but has the potential to emit one hundred (100) tons or more, has actual emissions of ten (10) tons or more, or particulate matter per year.

“Listed” means that the source or facility is **subject to a limit** (emphasis added) listed in Section 8.1 through 18 of the rule. The RMG Foundry source as a whole is not subject to any limit in 326 IAC 6-1-18. The former name of the source “Reliance Electric/Dodge Division” appears in 326 IAC 6-1-18 only to identify the location of the facilities at the RMG Foundry source that are subject to specific limits in 326 IAC 6-1-18. The facilities that are specifically limited by 326 IAC 6-1-18 are not subject to the requirements of 326 IAC 6-1-2. However, since RMG Foundry has the potential to emit more than one hundred (100) tons of particulate matter per year, all of the particulate-emitting facilities at RMG Foundry which are not specifically limited by 326 IAC 6-1-18 are subject to the limits listed in 326 IAC 6-1-2.

IDEM, OAQ has already determined that the RMG Foundry source has the potential to emit particulate matter greater than one hundred (100) tons per year and actual particulate matter emissions greater than ten (10) tons per year, and RMG Foundry does not dispute the fact that the entire source has emissions above these levels, therefore, the facilities not specifically cited in 326 IAC 6-1-18 are subject to 326 IAC 6-1-2.

**Comment 28:**

**State-Only v. Federally Enforceable Permit Conditions.**

Title V of the CAA has been interpreted to authorize permitting authorities to impose "periodic monitoring" requirements in permits only in those cases in which the applicable requirement does not provide for such. RMG agrees that such requirements are federally enforceable to the extent that they are reasonable and not arbitrary or capricious. However, neither Title V nor Part 70 nor 326 IAC § 2-7 authorizes monitoring requirements beyond those necessary to assure compliance. Thus, for instance, monitoring such as that required in Section D.1.7 may be federally enforceable. Other requirements such as D.1.8 (Parametric Monitoring), D.1.9 (Baghouse Inspections), and D.1.10 (Broken or Failed Bag Detection) are not mandated by the CAA, Part 70 or Rule 2-7, and are thus not federally enforceable. Therefore, the following sections of the permit must be designated as State-Only Enforceable: D.1.8, D.1.9, D.1.10, D.2.8, D.2.9, D.2.10, D.2.11, D.3.10, D.3.11, D.3.12, D.3.13, D.4.7, D.4.8, D.4.9, D.5.12, D.5.13, D.5.14, D.5.15, D.5.16, D.5.17, D.6.11, D.6.12, D.6.13, D.6.14, D.6.15, D.6.16, and D.6.19.

**Response 28:**

IDEM, OAQ can not add the sentence, "This condition is not federally enforceable." to the above mentioned conditions because 326 IAC 2-7-5 provides the authority for the compliance monitoring conditions and 326 IAC 2-7-5 is federally enforceable because it is part of IDEM's approved Title V Program. IDEM, OAQ contends that all of the monitoring requirements are necessary to assure continuous compliance. Therefore, no changes are necessary to the proposed permit.

In addition, on April 22, 2002, James Hanlon of EIS Environmental Engineers, Inc., submitted the following comment on behalf of RMG Foundry, LLC d/b/a RMG Foundry on the proposed Part 70 Operating Permit. The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.

**Comment 29:**

RMG Foundry requests the following addition be made to the pending Title V permit to render the CAA MACT standards to this coating operation not applicable.

D.5.6 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating applied to metal in foundry paint booth, known as EU 5-2, shall be limited to 3.5 pounds of VOCs per gallon of coating less water, as delivered to the applicator for any calendar day, for extreme performance coatings.

The hazardous air pollutant (HAP) emissions from all coatings applied in the foundry paint booth, known as EU 5-2, during any twelve (12) consecutive month period shall be limited to ten (10) tons of a single HAP and twenty-five (25) tons of total HAPs. Therefore, the requirements of 40 CFR 63 Subpart B (CAA Section 112, MACT standards) do not apply.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

**Response 29:**

The potential to emit HAPs from the foundry paint booth, known as EU 5-2, is 47.3 tons per year as shown on page 25 of 26 of Appendix A to the TSD. IDEM, OAQ will add the following conditions

to Section D.5 of the proposed permit to limit a single HAP to less than ten (10) tons per year and the combination of HAPs to less than twenty-five (25) tons per year may render requirements of 40 CFR 63 Subpart B not applicable to surface coating operations conducted at the foundry paint booth as Condition D.5.5. If a MACT is promulgated in the future, the specific language of the MACT will prevail, in that the source, being a major source of HAPs, may not have the option of taking a limit to render the requirements of that future MACT not applicable. However, at this time, IDEM, OAQ has incorporated a limit on HAPs as requested. In addition, Conditions D.5.9 (now D.5.8) and D.5.18 have also been revised as well as adding information to describe when a single compartment baghouse will be shut down in Condition D.5.14. This same wording for single compartment baghouses has been added to Conditions now D.1.10, D.2.10, D.3.12 (now D.3.10), and D.4.9, but are not shown here. The baghouse inspection Conditions D.5.8 (now D.5.13) as well as Conditions now D.2.9, D.3.11 (now D.3.10) and D.4.8 have been revised. The record keeping for the total static pressure drop has been changed in Condition D.5.18 and also in Conditions now D.1.11, D.2.11, D.3.12 and D.4.10, but are not shown here. Note Conditions D.5.2 and D.5.4 are being deleted and the explanation is provided in Change 17 toward the end of this Addendum.

#### **D.5.5 Hazardous Air Pollutants (HAPs) Limitations**

- (a) The worst case single HAP delivered to the coating applicators in the foundry paint booth, known as EU 5-2, including cleanup solvents shall be less than a total of ten (10) tons per twelve (12) consecutive month period with compliance determined at the end of each month, and**
- (b) The combination of HAPs delivered to the coating applicators in the foundry paint booth, known as EU 5-2, including cleanup solvents shall be less than a total of twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.**
- (c) Compliance with these HAP emission limitations may render future requirements of 40 CFR 63 Subpart B not applicable to the foundry paint booth, known as EU 5-2 depending on the specific applicability provisions of the specific rule.**

#### **D.5.67 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the one (1) paint booth, known as EU 5-2, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4 and the two (2) tumblast mechanical blasters, known as EU 5-6, and their control devices.

#### **Compliance Determination Requirements**

#### **D.5.78 Particulate Matter (PM)**

In order to comply with Conditions D.5.1, D.5.23 and D.5.35, the baghouses and cyclone for PM control shall be in operation and control emissions from the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6 at all times that these processes are in operation.

#### **D.5.89 Volatile Organic Compounds (VOC)**

Compliance with the VOC content and usage limitations contained in Condition D.5.46 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) ~~using formulation data supplied by the coating manufacturer~~ **by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to deter-**

**mine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.**

**D.5.109 Particulate Matter (PM)**

In order to comply with Condition D.5.35, the dry filters for PM control shall be in place and control emissions from the one (1) foundry paint booth, known as EU 5-2, at all times when the paint booth is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

**D.5.10 Hazardous Air Pollutants (HAPs)**

**Compliance with the HAPs usage limitations contained in Condition D.5.5 shall be determined using one (1) of the following:**

- (a) The manufacturer's certified product data sheet,
- (b) The manufacturer's material safety data sheet, or
- (c) Sampling and analysis, using any of the following test methods, as applicable:
  - (1) 40 CFR Part 60, Method 24, Appendix A, shall be used to measure the total volatile HAP content of the coating materials.
  - (2) 40 CFR Part 63, Method 311, Appendix A, shall be used to measure HAP content in coating materials by direct injection into a gas chromatography.
  - (3) Upon written application by the Permittee, the commissioner may approve an alternative test method.

**When an MSDS, a certified product data sheet, or other document specifies a range of values, the values resulting in the greatest calculated HAP emissions shall be used for determining compliance with Condition D.5.5.**

**D.5.11 Visible Emissions Notations**

- (a) Visible emission notations of the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6, Stack exhausts 43, 42, 16, 16A, 5 and 45 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.5.12 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6 at least once per shift when these processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouses are outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.5.13 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bags controlling the three (3) mechanical blasters (wheel blast, rail blast and #1 spinner hanger), known as EU 5-1, the grinding operation, known as EU 5-3, the #2 Wheelabrator spinner hanger mechanical blaster, known as EU 5-4, and the two (2) tumblast mechanical blasters, known as EU 5-6 when venting to the atmosphere. ~~A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors.~~ **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

#### D.5.14 Broken or Failed Bag Detection

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, **if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then** failed units and the associated process will be shut down immediately until the failed units

have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### D.5.15 Cyclone Inspections

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An inspection shall be performed each calendar quarter of the cyclone controlling the grinding operation (EU 5-3) when venting to the atmosphere. ~~A cyclone inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter.~~ Inspections are optional when venting to the indoors.

#### D.5.16 Cyclone Failure Detection

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In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.5.17 Monitoring

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- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the foundry paint booth, known as EU 5-2, stack 100 while the paint booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

#### D.5.18 Record Keeping Requirements

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- (a) To document compliance with Condition D.5.46, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC content limits established in Condition D.5.46.
  - (1) ~~The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents; and~~

- (2) ~~A log of the dates of use.~~ **The amount of coating material and solvent less water used on daily basis or if necessary, the volume weighted VOC content of the coatings used for each day.**

  - (A) **Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.**
  - (B) **Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.**
  
- (3) **The amount of coating material and solvent less water used on daily basis, or if necessary, the volume weighted VOC content of the coatings used for each day.**

  - (A) **Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.**
  - (B) **Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.**
  
- (b) **To document compliance with Condition D.5.5, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the HAPs usage limits established in Condition D.5.5.**

  - (1) **The amount and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents; and**
  - (2) **The weight of the worst single HAP and the combination of HAPs emitted for each compliance period.**
  
- (bc) To document compliance with Condition D.5.11, the Permittee shall maintain records of visible emission notations of the Stack exhausts 43, 42, 5 and 45 once per shift.
  
- (ed) To document compliance with Condition D.5.12, the Permittee shall maintain ~~the following:~~

  - (+) **Once per shift records of the inlet and outlet differential total static pressure drop during normal operation when venting to the atmosphere.**
  - ~~(2) Documentation of the dates vents are redirected.~~
  
- (de) To document compliance with Conditions D.5.13 and D.5.15, the Permittee shall maintain records of the results of the inspections required under Conditions D.5.13 and D.5.15 and the dates the vents are redirected.
  
- (ef) To document compliance with Conditions D.5.14 and D.5.17, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

- (fg) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.5.19 Reporting Requirements**

**A quarterly summary of the information to document compliance with Condition D.5.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

**Source Name:** RMG Foundry, LLC d/b/a RMG Foundry  
**Source Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Mailing Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Part 70 Permit No.:** T 141-6087-00007  
**Facility:** Foundry paint booth, known as EU 5-2  
**Parameter:** Worst Case Single HAP Delivered to the Applicators  
**Limit:** Less than ten (10) tons of a single HAP per twelve (12) consecutive month period with compliance determined at the end of each month.

**YEAR:** \_\_\_\_\_

Month	Single HAP (tons)	Single HAP (tons)	Single HAP (tons)
	This Month	Previous 11 Months	12 Month Total

9      **No deviation occurred in this quarter.**

9      **Deviation/s occurred in this quarter.**  
**Deviation has been reported on:** \_\_\_\_\_

**Submitted by:** \_\_\_\_\_

**Title / Position:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Attach a signed certification to complete this report.**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

**Source Name:** RMG Foundry, LLC d/b/a RMG Foundry  
**Source Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Mailing Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Part 70 Permit No.:** T 141-6087-00007  
**Facility:** Foundry paint booth, known as EU 5-2  
**Parameter:** Combination of HAPs Delivered to the Applicators  
**Limit:** Less than twenty-five (25) tons of the combination of HAPs per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Combination of HAPs (tons)	Combination of HAPs (tons)	Combination of HAPs (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**Attach a signed certification to complete this report.**

In addition, on September 5, 2002, James Hanlon of EIS Environmental Engineers, Inc., submitted the following comment on behalf of RMG Foundry, LLC d/b/a RMG Foundry on the proposed Part 70 Operating Permit. Subsequently, on January 24 and 31, 2003, James Hanlon of EIS Environmental Engineers, Inc., supplemented the comments submitted on September 5, 2002 to make the emission unit description consisted with the proposed NESHAP Subpart EEEEE, Iron and Steel Foundries and redefining the emission limits necessary to comply with 326 IAC 6-1-18. The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.

**Comment 30:**

Specifically, RMG Foundry, LLC d/b/a RMG Foundry requested changes to the proposed permit wording to remove the question of controlling emissions from molding operations. There are no EPA sources that list emissions from foundry molding operations. Our goal is that the permit be clear that there are no regulated emissions from molding operations and that the permit does not require controls of any molding operations at the source. RMG Foundry, LLC d/b/a RMG Foundry provided the following suggested language based on the combination of both sets of comments:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (e) One (1) large pinlift operation, consisting of a molding operation and a pouring area, known as EU 2-1, installed in 1975. The molding operation does not create emissions, pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (f) One (1) small pinlift operation, consisting of a molding operation and a pouring area, known as EU 2-2, installed in 1975. The molding operation does not create emissions, pouring area emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (k) One (1) floor molding, operation, consisting of a molding operation and a pouring area, known as EU 2-7, installed in 1895. The molding operation does not create emissions, pouring area emissions are released to the floor molding area general building ventilation, capacity: 1.0 ton of molten iron castings per hour.
- (l) One (1) pinlift operation, consisting of a molding operation and a pouring area, known as EU 3-1, installed in 1959. The molding operation does not create emissions, pouring and cooling operation emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (m) One (1) slinger operation, consisting of a molding operation and a pouring area, known as EU 3-2, installed in 1959. The molding operation does not create emissions, pouring emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (r) One (1) North SPO operation, consisting of a molding operation and a pouring area, known as EU 3-7, installed in 1959. The molding operation does not create emissions, pouring emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (s) One (1) South SPO operation, consisting of a molding operation and a pouring area, known as EU 3-8, installed in 1959. The molding operation does not create emissions, pouring

emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.

- (t) One (1) Hunter molding, pouring and cooling line consisting of a molding station, a pouring station, and a cooling conveyor; known as EU 4-1, installed in 1992, with only the molding unit, replaced in December 2000. The molding operation does not create emissions, the emissions from the pouring and cooling operations are controlled by a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 7.5 tons of molten iron per hour.
- (u) One (1) Sinto molding, pouring and cooling line consisting of a molding station, a pouring station, and a cooling area, known as the Small Sinto, EU 4-2a and EU 4-2b, both installed in 1974, replaced in 1998. The molding operation does not create emissions, emissions from the pouring operations (EU 4-2a) released to the general building ventilation, cooling operations (EU 4-2b) equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 6.0 tons of molten iron per hour, each.
- (y) One (1) Sinto molding, pouring and cooling line consisting of a molding station, a pouring station, and a cooling area, known as the Large Sinto, EU 4-7. The molding operation does not create emissions, the emissions from the pouring and cooling operations are controlled by a baghouse, known as Middle Foundry B/H, for PM control, exhausted to Stack 46, installed in 2001, capacity: 8.0 tons of molten iron per hour.

## SECTION D.2

## FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: East Foundry Operations- Department 24

- (e) One (1) large pinlift molding, pouring, and cooling line, known as EU 2-1, installed in 1975. The molding operation does not create emissions, pouring and cooling operation emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (f) One (1) small pinlift molding, pouring, and cooling line, known as EU 2-2, installed in 1975. The molding operation does not create emissions, pouring and cooling operation emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (k) One (1) floor molding, pouring, and cooling line, known as EU 2-7, installed in 1895. The molding operation does not create emissions, pouring and cooling operation emissions are released to the floor molding area general building ventilation, capacity: 1.0 ton of molten iron castings per hour.

### D.2.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (d) 0.03 grains per dry standard cubic foot of outlet air from the large and small pinlift molding, pouring, and cooling lines, known as EU 2-1 and EU 2-2. The molding operation does not create emissions, pouring, and cooling operation emissions are released to the East Foundry main molding area general ventilation.
- (e) 0.03 grains per dry standard cubic foot of outlet air from the floor molding, pouring, and cooling line, known as EU 2-7. The molding operation does not create emissions, pouring, and cooling operation emissions are released to the floor molding area general ventilation.

### SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: South Foundry Operations - Department 26

- (l) One (1) pinlift molding, pouring, and cooling line, known as EU 3-1, installed in 1959. The molding operation does not create emissions, pouring and cooling operation emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (m) One (1) slinger molding, pouring, and cooling line, known as EU 3-2, installed in 1959. The molding operation does not create emissions, pouring and cooling operation emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (r) One (1) North SPO molding, pouring and cooling line, known as EU 3-7, installed in 1959. The molding operation does not create emissions, pouring and cooling operation emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (s) One (1) South SPO molding, pouring, and cooling line, known as EU 3-8, installed in 1959. The molding operation does not create emissions, pouring and cooling operation emissions are released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.

#### D.3.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (b) 0.03 grains per dry standard cubic foot of outlet air from the pinlift and slinger molding, pouring, and cooling lines, known as EU 3-1 and EU 3-2, the new sand bin/hopper, known as EU 3-5 as well as the North and South SPO molding, pouring, and cooling lines, known as EU 3-7 and EU 3-8. Molding operations do not create emissions, emissions from the other operations are released to the South Foundry general ventilation.

### SECTION D.4 FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Middle Foundry Operations - Department 30

- (t) One (1) Hunter molding, pouring, and cooling line, known as EU 4-1, installed in 1992, with only the molding unit, replaced in December 2000. The molding operation does not create emissions, the emissions from the pouring and cooling operations are controlled by a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 7.5 tons of molten iron per hour.
- (u) One (1) Sinto molding, pouring, and cooling line, known as the Small Sinto, EU 4-2a and EU 4-2b, both installed in 1974, replaced in 1998. The molding operation does not create emissions, emissions from the pouring operations (EU 4-2a) released to the general building ventilation, cooling operations (EU 4-2b) equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 6.0 tons of molten iron per hour, each.
- (y) One (1) Sinto molding, pouring, and cooling line, known as the Large Sinto, EU 4-7 The molding operation does not create emissions, the emissions from the pouring and cooling operations are controlled by a baghouse, known as Middle Foundry B/H, for PM control, exhausted to Stack 46, installed in 2001, capacity: 8.0 tons of molten iron per hour.

D.4.1 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) 0.03 grains per dry standard cubic foot of outlet air from the Hunter pouring and cooling operations, known as EU 4-1, the Sinto cooling operation, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and the Sinto pouring and cooling operation, known as EU 4-7, exhausted to Stack 46, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute. Molding operations do not create emissions.

D.4.2 Particulate Matter (PM) [326 IAC 2-2]

- (a) In order to render the requirements of 326 IAC 2-2 not applicable for emissions from the Hunter pouring and cooling operations, known as EU 4-1, the Sinto cooling operation, known as EU 4-2b and the Sinto pouring and cooling operation, known as EU 4-7:

D.4.4 Particulate Matter (PM)

In order to comply with Conditions D.4.1 and D.4.2, the baghouse for PM control shall be in operation and control pouring and cooling emissions from the Hunter molding, pouring, and cooling line, known as EU 4-1, emissions from the Sinto and cooling operation, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and pouring and cooling emissions from the Sinto molding, pouring and cooling line, known as EU 4-7, at all times that the molding, pouring, and cooling lines, shakeout and sand handling processes are in operation.

D.4.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 180 days after issuance of this permit in order to demonstrate compliance with Conditions D.4.1(a) and D.4.2, the Permittee shall perform PM and PM<sub>10</sub> testing of the Middle Foundry baghouse exhaust, Stack 46, controlling emissions from Hunter pouring and cooling operations, known as EU 4-1, Sinto cooling operation, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto pouring and cooling operations, known as EU 4-7, as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing. All associated facilities exhausting to a single stack shall be operating when determining compliance with the overall limits.

D.4.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the Hunter pouring and cooling operations, known as EU 4-1, Sinto cooling operation, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto pouring and cooling operations, known as EU 4-7, at least once per shift when these processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.4.8 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the Hunter pouring and cooling operations, known as EU 4-1, Sinto cooling operation, known as EU 4-2b, the shakeout

operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto pouring and cooling operations, known as EU 4-7, when venting to the atmosphere. A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

### Response 30:

IDEM, OAQ agrees that the pouring and cooling descriptions must be concise to make sure that there is no misunderstanding that the molding operations are not controlled. Also note that descriptive information can not be included in enforceable permit conditions, such Condition D.2.3, etc. Therefore, Conditions A.2(e), (f), (k), (l), (m), (r), (s), (t), (u) and (y), Sections D.2, D.3, and D.4, Conditions D.2.3 (d) and (e), D.3.3(b), D.4.1(a), D.4.2(a)(b), D.4.3, D.4.4, D.4.5, D.4.7 and D.4.8 have been revised as follows:

#### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

##### East Foundry Operations- Department 24

- (e) One (1) large pinlift ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 2-1, installed in 1975;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (f) One (1) small pinlift ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 2-2, installed in 1975;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (k) One (1) floor ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 2-7, installed in 1895;. **The pouring area emissions are** released to the floor molding area general building ventilation, capacity: 1.0 ton of molten iron castings per hour.

##### South Foundry Operations - Department 26

- (l) One (1) pinlift ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 3-1, installed in 1959;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (m) One (1) slinger ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 3-2, installed in 1959;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (r) One (1) North SPO ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 3-7, installed in 1959;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.

- (s) One (1) South SPO ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 3-8, installed in 1959;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.

Middle Foundry Operations - Department 30

- (t) One (1) Hunter molding, pouring and cooling line, **consisting of a molding station, a pouring station, and a cooling conveyor**, known as EU 4-1, installed in 1992, with only the molding unit, replaced in December 2000;. **The emissions from the pouring and cooling operations are controlled by** ~~equipped with~~ a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 7.5 tons of molten iron per hour.
- (u) One (1) Sinto molding, pouring and cooling line, **consisting of a molding station, a pouring station, and a cooling area**, known as the Small Sinto, EU 4-2a and EU 4-2b, both installed in 1974, replaced in 1998;. **The emissions from the pouring operations (EU 4-2a)** released to the general building ventilation, cooling operations (EU 4-2b), equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 6.0 tons of molten iron per hour, each.
- (y) One (1) Sinto molding, pouring and cooling line, **consisting of a molding station, a pouring station, and a cooling area**, known as the Large Sinto, EU 4-7;. **The emissions from the pouring and cooling operations, are controlled by** ~~equipped with~~ a baghouse, known as Middle Foundry B/H, for PM control, exhausted to Stack 46, installed in 2001, capacity: 8.0 tons of molten iron per hour.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: East Foundry Operations- Department 24

East Foundry Operations- Department 24

- (e) One (1) large pinlift ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 2-1, installed in 1975;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (f) One (1) small pinlift ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 2-2, installed in 1975;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron castings per hour.
- (k) One (1) floor ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 2-7, installed in 1895;. **The pouring area emissions are** released to the floor molding area general building ventilation, capacity: 1.0 ton of molten iron castings per hour.

### SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: South Foundry Operations - Department 26

South Foundry Operations - Department 26

- (l) One (1) pinlift ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 3-1, installed in 1959;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (m) One (1) slinger ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 3-2, installed in 1959;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (r) One (1) North SPO ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 3-7, installed in 1959;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.
- (s) One (1) South SPO ~~molding, pouring and cooling line~~ **operation, consisting of a molding operation and a pouring area**, known as EU 3-8, installed in 1959;. **The pouring area emissions are** released to the general building ventilation, capacity: 5.0 tons of molten iron per hour.

### SECTION D.4 FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Middle Foundry Operations - Department 30

Middle Foundry Operations - Department 30

- (t) One (1) Hunter molding, pouring and cooling line, **consisting of a molding station, a pouring station, and a cooling conveyor**, known as EU 4-1, installed in 1992, with only the molding unit, replaced in December 2000;. **The emissions from the pouring and cooling operations are controlled by** ~~equipped with~~ a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 7.5 tons of molten iron per hour.
- (u) One (1) Sinto molding, pouring and cooling line, **consisting of a molding station, a pouring station, and a cooling area**, known as the Small Sinto, EU 4-2a and EU 4-2b, both installed in 1974, replaced in 1998;. **The emissions from the pouring operations (EU 4-2a) released to the general building ventilation, cooling operations (EU 4-2b), equipped with a baghouse, known as Middle Foundry B/H, exhausted to Stack 46, capacity: 6.0 tons of molten iron per hour, each.**
- (y) One (1) Sinto molding, pouring and cooling line, **consisting of a molding station, a pouring station, and a cooling area**, known as the Large Sinto, EU 4-7;. **The emissions from the pouring and cooling operations, are controlled by** ~~equipped with~~ a baghouse, known as Middle Foundry B/H, for PM control, exhausted to Stack 46, installed in 2001, capacity: 8.0 tons of molten iron per hour.

D.2.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) ~~0.03 grains per dry standard cubic foot of outlet air from the shakeout operation, known as EU 2-3, exhausted to Stack 49, equivalent to 8.49 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute.~~
- (ab) 0.03 grains per dry standard cubic foot of outlet air from the premix silo, known as EU 2-5, connected to Stack 15, equivalent to 0.231 pounds per hour at a flow rate of 900 dry standard cubic feet per minute.
- (be) 0.03 grains per dry standard cubic foot of outlet air from the new sand silo, known as EU 2-6, exhausted to Stack 49, equivalent to 8.49 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute.
- (cd) 0.03 grains per dry standard cubic foot of outlet air from the large and small pinlift ~~molding, pouring, and cooling~~ **operations lines**, known as EU 2-1 and EU 2-2. ~~All released to the East Foundry main molding area general ventilation.~~
- (de) 0.03 grains per dry standard cubic foot of outlet air from the floor ~~molding, pouring, and cooling~~ **operation line**, known as EU 2-7, ~~released to the floor molding area general ventilation.~~

D.3.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (b) 0.03 grains per dry standard cubic foot of outlet air from the pinlift and slinger ~~molding, pouring, and cooling~~ **operations lines**, known as EU 3-1 and EU 3-2, the new sand bin/hopper, known as EU 3-5 as well as the North and South SPO ~~operation molding, pouring, and cooling lines~~, known as EU 3-7 and EU 3-8 ~~all released to the South Foundry general ventilation.~~

D.4.1 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) 0.03 grains per dry standard cubic foot of outlet air from the Hunter pouring and cooling operations, known as EU 4-1, the Sinto ~~molding and cooling line~~ **operation**, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and the Sinto ~~molding, pouring and cooling line~~ **operation**, known as EU 4-7, exhausted to Stack 46, equivalent to 10.4 pounds per hour at a flow rate of 40,500 dry standard cubic feet per minute.

D.4.2 Particulate Matter (PM) [326 IAC 2-2]

- (a) In order to render the requirements of 326 IAC 2-2 not applicable for **emissions from the Hunter molding, pouring and cooling line operations**, known as EU 4-1, the Sinto ~~molding and cooling line~~ **operation**, known as EU 4-2b and the Sinto ~~molding, pouring and cooling line~~ **operation**, known as EU 4-7:
- (b) In order to render the requirements of 326 IAC 2-2 not applicable the throughput of metal to the Sinto ~~molding, pouring and cooling line~~, known as EU 4-2a and EU 4-2b, shall be

limited to less than 19,240 tons per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to PM emissions from pouring of less than a total of 27.0 tons per year and equivalent to PM<sub>10</sub> emissions of less than a total of 13.25 tons per year. Total PM emissions from the Sinto are limited to 37.5 tons per year and total PM<sub>10</sub> emissions are limited to 18.4 tons per year.

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the Hunter ~~molding~~, pouring and cooling line, known as EU 4-1, Sinto cooling line, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto ~~molding~~, pouring and cooling line, known as EU 4-7 and any control devices.

D.4.4 Particulate Matter (PM)

In order to comply with Conditions D.4.1 and D.4.2, the baghouse for PM control shall be in operation and control **pouring and cooling** emissions from the Hunter molding, pouring, and cooling line, known as EU 4-1, **emissions from the Sinto ~~molding and cooling line operation~~**, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and **pouring and cooling emissions from the Sinto** molding, pouring and cooling line, known as EU 4-7, at all times that the molding, pouring, and cooling lines, shakeout and sand handling processes are in operation.

D.4.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 180 days after issuance of this permit in order to demonstrate compliance with Conditions D.4.1(a) and D.4.2, the Permittee shall perform PM and PM<sub>10</sub> testing of the Middle Foundry baghouse exhaust, Stack 46, controlling emissions from Hunter ~~molding~~, pouring and cooling ~~line operations~~, known as EU 4-1, Sinto ~~molding and cooling line operation~~, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto ~~molding~~, pouring and cooling ~~line operations~~, known as EU 4-7, as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing. All associated facilities exhausting to a single stack shall be operating when determining compliance with the overall limits.

D.4.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the Hunter ~~molding~~, pouring and cooling ~~line operations~~, known as EU 4-1, Sinto ~~molding and cooling line operation~~, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto ~~molding~~, pouring and cooling ~~line operations~~, known as EU 4-7, at least once per shift when these processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water ~~or a range established during the latest stack test~~, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.4.8 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the Hunter ~~molding~~, pouring and cooling ~~line operations~~, known as EU 4-1, Sinto ~~molding and cooling line operation~~, known as EU 4-2b, the shakeout operation, known as EU 4-3, the sand handling operation, known as EU 4-4, and Sinto ~~molding~~, pouring and cooling ~~line operations~~, known as EU 4-7, when venting

to the atmosphere. ~~A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors.~~ **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

**Comment 31:**

Implement the following changes to Conditions D.2.2 and D.2.3 to combined the emissions limits for Stack 49 for emissions from EU 2-4 and EU 2-3 as follows:

D.2.2 Particulate Matter (PM) [326 IAC 6-1-18]

Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the sand handling operation, known as EU 2-4 and the shakeout operation, known as EU 2-3 (also known as point 35P) exhausted to Stack 49 shall not exceed:

- (a) 0.01 grains per dry standard cubic foot of outlet air, equivalent to 2.83 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute and
- (b) 3.16 tons per year. The emission unit will comply by meeting the following limits:
  - (1) PM emissions from Stack 49 shall not exceed ~~3.6~~ 0.036 pounds of PM per ton of sand handled and 0.032 pounds of PM per ton of castings.
  - (2) The Permittee shall not exceed a limit of ~~177,329~~ 150,000 tons of sand per twelve (12) consecutive month period in the sand handling operation, known as EU 2-4 and 25,000 tons of castings processed by the shakeout operation, known as EU 2-3.

D.2.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- ~~(a) 0.03 grains per dry standard cubic foot of outlet air from the shakeout operation, known as EU 2-3, exhausted to Stack 49, equivalent to 8.49 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute.~~

**Response 31:**

IDEM, OAQ has combined the emission limitations from Condition D.2.3(a) and incorporated into Condition D.2.2 and retains the more restrictive emission limitations of Condition D.2.2 as follows:

D.2.2 Particulate Matter (PM) [326 IAC 6-1-18]

Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the sand handling operation, known as EU 2-4 **and the shakeout operation, known as EU 2-3**, (also known as point 35P) exhausted to Stack 49 shall not exceed:

- (a) 0.01 grains per dry standard cubic foot of outlet air, equivalent to 2.83 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute and
- (b) 3.16 tons per year. **The sand handling operation, known as EU 2-4 and the shakeout operation, known as EU 2-3, will comply by meeting with the following limits:**

- (1) PM emissions **from Stack 49** shall not exceed **0.036** ~~3.16~~ pounds of PM per ton of sand handled **and 0.032 pounds of PM per ton of castings.**
- (2) The Permittee shall not exceed a limit of ~~477,329~~ **150,000** tons of sand per twelve (12) consecutive month period in the sand handling operation, known as EU 2-4 **and 25,000 tons of castings per twelve (12) consecutive month period process by the shakeout operation, known as EU 2-3.**

The sand limit for EU 2-4 has been revised to 150,000 tons of sand per twelve (12) consecutive month period on the Quarterly Report Form and an additional Quarterly Report Form has been included for EU 2-3 as follows:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

**Source Name:** RMG Foundry, LLC d/b/a RMG Foundry  
**Source Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Mailing Address:** 500 South Union Street, Mishawaka, Indiana 46544  
**Part 70 Permit No.:** T 141-6087-00007  
**Facility:** Shakeout Operation (EU 2-3)  
**Parameter:** Castings  
**Limit:** Total 25,000 tons of castings per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to 0.40 tons of PM per year.

YEAR: \_\_\_\_\_

Month	Castings (tons)	Castings (tons)	Castings (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**Attach a signed certification to complete this report.**

D.2.3 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1 (Nonattainment area limitations), the allowable particulate matter (PM) emission rates from the following emission units shall not exceed:

- (a) ~~0.03 grains per dry standard cubic foot of outlet air from the shakeout operation, known as EU 2-3, exhausted to Stack 49, equivalent to 8.49 pounds per hour at a flow rate of 33,000 dry standard cubic feet per minute.~~

**Comment 32:**

Similarly revise the wording in Condition D.3.2(b) to reflect the change in Condition D.1.2 and the emission factor from D.2.2 as follows:

D.3.2 Particulate Matter (PM) [326 IAC 6-1-18]

(a) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the shakeout operation, known as EU 3-3, exhausted to Stack 44 shall not exceed:

- (1) 0.012 grains per dry standard cubic foot of outlet air, equivalent to 2.78 pounds per hour at a flow rate of 27,000 dry standard cubic feet per minute and
- (2) 5.17 tons per year.

(b) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the sand handling operation, known as EU 3-4, exhausted to Stack 51 shall not exceed:

- (1) 0.017 grains per dry standard cubic foot of outlet air, equivalent to 4.01 pounds per hour at a flow rate of 27,500 dry standard cubic feet per minute and
- (2) 6.66 tons per twelve (12) consecutive month period. The emission unit will comply by meeting the following limits:
  - (A) PM emissions from Stack 51 shall not exceed ~~3.6~~ 0.036 pounds of PM per ton of sand handled.
  - (B) The Permittee shall not exceed a limit of 373,737 tons of sand per twelve (12) consecutive month period in the sand handling operation, known as E 3-4.

**Response 32:**

Condition D.3.2(b) has had the wording clarified and the emission factor corrected to take into account the after control emission factor as follows:

D.3.2 Particulate Matter (PM) [326 IAC 6-1-18]

(a) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the shakeout operation, known as EU 3-3, exhausted to Stack 44 shall not exceed:

- (1) 0.012 grains per dry standard cubic foot of outlet air, equivalent to 2.78 pounds per hour at a flow rate of 27,000 dry standard cubic feet per minute and
- (2) 5.17 tons per year.

- (b) Pursuant to 326 IAC 6-1-18 (Nonattainment area particulate limitations: St. Joseph County), the allowable particulate matter (PM) emission rate from the sand handling operation, known as EU 3-4, exhausted to Stack 51 shall not exceed:
- (1) 0.017 grains per dry standard cubic foot of outlet air, equivalent to 4.01 pounds per hour at a flow rate of 27,500 dry standard cubic feet per minute and
  - (2) 6.66 tons per twelve (12) consecutive month period. **The sand handling operation, known as EU 3-4, will comply by meeting the following limits:**
    - (A) PM emissions **from Stack 51** shall not exceed **0.036** ~~3-6~~ pounds of PM per ton of sand handled.
    - (B) The Permittee shall not exceed a limit of 373,737 tons of sand per twelve (12) consecutive month period **with compliance determined at the end of each month** in the sand handling operation, known as E 3-4.

Upon further review, the OAQ has decided to make the following changes to the Part 70 Operating Permit: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

## Section B

### Change 1:

The general provisions; term of permit rule cite was added to Condition B.2 (Permit Term). In order to avoid confusion for renewals as to what is the "original" date, IDEM, OAQ is referring to, the following change has been made:

#### B.2 Permit Term ~~[326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]~~

This permit is issued for a fixed term of five (5) years from the ~~original~~ **issuance date of this permit**, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

### Change 2:

The duty to supplement an application is not an ongoing requirement after the permit is issued; therefore, (a) has been removed from B.7 Duty to Supplement and Provide Information. Since Condition B.7(c) (now (b) (Duty to Provide Information) already addresses confidentiality, the last sentence of (b) was revised to remove the statement about confidential information and (c) was updated for clarity as follows:

#### B.7 Duty to Supplement and Provide Information ~~[326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)]~~ ~~[326 IAC 2-7-6(6)]~~

- (a) ~~The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:~~

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

~~The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).~~

- (ab) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit. ~~or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality. [326 IAC 2-7-5(6)(E)]~~
- (be) **For information furnished by the Permittee to IDEM, OAQ,** ~~the~~ Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

### Change 3:

Condition B.11 (Preventive Maintenance Plan) has been revised because it is not necessary to state twice that the PMP does not need to be certified. The statement is more appropriately contained in (c), it has been removed from (a). Condition B.11(b) was revised to clarify that the required record keeping needs to be implemented as well as the rest of the plan to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit. Also, Condition B.11(c) has been revised to clarify that OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance is the primary contributor to an exceedance of any limitation on emissions or potential to emit . The requirements to keep records of preventive maintenance in (d) has been moved to D Section. Because the general record keeping requirements (i.e., retained for five (5) years) are in Section C, it is not necessary to include them in this condition or in the D condition. At some sources, an OM&M Plan maybe required. Instead of having two (2) separate plans, the OM&M Plan may satisfy the PMP requirements, so Condition B.11(d) has been added as follows:

**B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]**  
**[326 IAC 1-6-3]**

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee’s control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

~~The PMP and the~~ PMP extension notification **does** not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs **including any required record keeping**, as necessary to ensure that failure to implement a PMP does not cause or contribute to ~~a violation~~ **an exceedance** of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or ~~contributes to any violation~~ **is the primary contributor to an exceedance of any limitation on emissions or potential to emit**. The PMP does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (d) ~~Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.~~

**To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OM&M) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.**

**Change 4:**

The requirement to include emergencies in the Quarterly Deviation and Compliance Monitoring Report has been moved from Condition B.15 to Condition B.12. Condition B.12(e) Emergency Provisions has been revised to correct the rule cite and Condition B.12(h) has been added as follows:

B.12 Emergency Provisions [326 IAC 2-7-16]

- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(409) be revised in response to an emergency.
- (h) Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.**

**Change 5:**

Condition B.15(c) (Deviations from Permit Requirements and Conditions) has been deleted and was incorporated in Condition B.12(h) (Emergency Provisions).

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- ~~(c) — Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.~~

**Change 6:**

In order to clarify that an amendment or modification will not be required for the addition, operation or removal of a nonroad engine, an explanation has been added to Condition B.18(d) Permit Amendment or Modification as follows:

**B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:
- Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015
- Any such application shall be certified by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (d) **No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.**

**Change 7:**

In order to be consistent with 326 IAC 2-7-20(a)(4), the rule cite in Condition B.20(a)(5) has been revised as follows:

**B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]**

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

**Change 8:**

Condition B.21 (Source Modification Requirement) was revised as follows:

**B.21 Source Modification Requirement [326 IAC 2-7-10.5]**

A modification, construction, or reconstruction is governed by **the requirements of** 326 IAC 2 and 326 IAC 2-7-10.5.

**Change 9:**

326 IAC 2-1.1-7 specifies that nonpayment may result in revocation of the permit. This is not specified in 326 IAC 2-7; therefore, this rule cite is being added to Condition B.24. Also, the section and phone number of who the Permittee can contact has been corrected in (c) as follows:

**B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]**

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- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-~~0425~~ **4230** (ask for OAQ, ~~Technical Support and Modeling Section~~ **I/M & Billing Section**), to determine the appropriate permit fee.

**Section C**

**Change 10:**

Condition C.7(e) (Asbestos Abatement Projects) has been revised to correct the rule cite and Condition C.7(f) has been added. Condition C.7(f) (now (g)) has been clarified to indicate that the requirement to have an Indiana accredited asbestos inspector is not federally enforceable as follows:

**C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

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- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-~~41~~, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and renovation**  
**The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).**
- (fg) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable. **The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.**

**Change 11:**

The following was added to Condition C.9 (Compliance Requirements) to state what OAQ does when stack testing, monitoring, or reporting is required to assure compliance with applicable requirements as follows:

**C.9 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements **by issuing an order under 326 IAC 2-1.1-11**. Any monitoring

or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

**Change 12:**

Condition C.11 has been deleted since this source does not have either a continuous emissions monitoring system or a continuous opacity monitoring system and subsequent conditions have been renumbered as follows:

~~C.11 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]~~

~~(a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less often than once an hour until such time as the continuous monitor is back in operation.~~

~~(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.~~

**Change 13:**

Condition C.15 (now C.14) (Risk Management Plan) has been revised so that it is more straightforward, and the condition requires the source to comply with the applicable requirements of 40 CFR 68 if a regulated substance is present at a source in more than a threshold quantity as follows:

~~C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68:215]~~

~~If a regulated substance, subject to as defined in 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit the source must comply with the applicable requirements of 40 CFR 68:~~

~~(a) A compliance schedule for meeting the requirements of 40 CFR 68; or~~

~~(b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP):~~

~~All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34):~~

**Change 14:**

In order to clarify which documents need to be certified by the responsible official, the following update has been made in Condition C.17 (now C.16) as follows:

~~C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]~~

~~(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these~~

response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The **response action** documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

#### Change 15:

Condition C.18(a)(2) (now C.17(a)(2) (Emission Statement) has been updated to include the specific rule cite that defines the regulated pollutants being referred to in this condition as follows:

C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
  - (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
  - (2) Indicate estimated actual emissions of ~~the~~ regulated pollutants (as defined by 326 IAC 2-7-1(32) ("**Regulated pollutant which is used only for purposes of Section 19 of this rule**") from the source, for purposes of Part 70 fee assessment.

#### Change 16:

Condition C.19 (now C.18) (General Record Keeping Requirements) has been revised since it is acceptable for records to be electronically accessible instead of being physically present at a source. Therefore, the following change has been made:

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required **monitoring** data, reports and support information **required by this permit** shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be ~~kept~~ **physically present or electronically accessible** at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**Change 17:**

Condition C.21 (Application Requirements for Section 112(j) of the Clean Air Act) was added to the permit model.

**Part 2 MACT Application Submittal Requirement**

**C.21 Application Requirements for Section 112(j) of the Clean Air Act [40 CFR 63.52(e)] [40 CFR 63.56(a)] [40 CFR 63.9(b)] [326 IAC 2-7-12]**

- (a) The Permittee shall submit a Part 2 MACT Application in accordance with 40 CFR 63.52(e)(1). The Part 2 MACT Application shall meet the requirements of 40 CFR 63.53(b).
- (b) Notwithstanding paragraph (a), the Permittee is not required to submit a Part 2 MACT Application if the Permittee no longer meets the applicability criteria of 40 CFR 63.50 by the application deadline in 40 CFR 63.52(e)(1). For example, the Permittee would not have to submit a Part 2 MACT Application if, by the application deadline:
- (1) The source is no longer a major source of hazardous air pollutants, as defined in 40 CFR 63.2;
  - (2) The source no longer includes one or more units in an affected source category for which the U.S. EPA failed to promulgate an emission standard by May 15, 2002; or
  - (3) The MACT standard or standards for the affected source categories included at the source are promulgated.
- (c) Notwithstanding paragraph (a), pursuant to 40 CFR 63.56(a), the Permittee shall comply with an applicable promulgated MACT standard in accordance with the schedule provided in the MACT standard if the MACT standard is promulgated prior to the Part 2 MACT Application deadline or prior to the issuance of permit with a case-by-case Section 112(j) MACT determination. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), the Permittee shall submit an initial notification not later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The initial notification shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Director, Air and Radiation Division  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

**Change 18:**

Conditions D.1.9, D.2.9 and D.3.10 have been revised since the quarterly inspections do not need to be conducted in the last month of the quarter, but they should not be conducted in consecutive months.

**D.1.9 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the scrap preheater, known as EU 1-4, when venting to the atmosphere. A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors. **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

**D.2.9 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the shakeout operation, known as EU 2-3, the sand handling operation, known as EU 2-4, and the new sand silo, known as EU 2-6, when venting to the atmosphere. **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

**D.3.10 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the shakeout and sand handling operations when venting to the atmosphere. **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

**Change 19:**

Since Condition D.6.1(a) contains a combined SO<sub>2</sub> emission limit for the Laempe LL 30 Core Machine (EU 7-4b) and the two (2) Shalco core machines (EU 7-8) to render the requirements of 326 IAC 2-2 not applicable, Condition D.6.10 (now D.6.9) has been revised to reference both emission units, EU 7-4b and EU 7-8 as follows:

**D.6.9~~10~~ Testing Requirements [326 IAC 2-7-6(1,6)] [326 IAC 2-1.1-11]**

Within 180 days after re-directing the scrubber exhaust to the outside atmosphere associated with Laempe LL 30 core machine, known as EU 7-4b **and the two (2) Shalco core machines (EU 7-8)**, in order to demonstrate compliance with Condition D.6.1(a), the Permittee shall perform SO<sub>2</sub> testing of the emission rate and scrubber efficiency utilizing Method 6 (40 CFR 60, Appendix A) for SO<sub>2</sub>, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. ~~In addition to these requirements, IDEM may require compliance testing when necessary to determine if these facilities are in compliance.~~ **Testing shall be conducted in accordance with Section C- Performance Testing.**

**Change 20:**

Wording has been added to Condition D.6.13 (now D.6.12) to indicate that the flow switches shall be equipped with an interlock system so that the scrubber shuts down automatically and reference to the calibration of any instrument used to measure flow rate has been deleted since flow rate is not measured as follows:

**D.6.12~~13~~ Scrubber Flow Switches**

The Permittee shall **equip the flow switches with an interlock mechanism that shuts down the emission unit(s) automatically when scrubber flow is below the minimum specified by the manufacturer.** The Permittee shall record whether or not the scrubber flow switches used in conjunction with the two (2) scrubbers controlling SO<sub>2</sub> emissions from the iso-set process, consisting

of four (4) Gaylord core machines, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b and the two (2) Shalco core machines, known as EU 7-8, are operating properly at least once per month. When for any one reading, the scrubber flow switch is not operating properly, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A ~~non~~ ~~not~~ operating scrubber flow switch is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

~~The instrument used for determining the flow rate shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.~~

**Change 21:**

Condition D.6.14 (now D.6.13) has been revised as follows to indicate that Inspections shall not be performed in consecutive months as follows:

**D.6.14 Scrubber Inspection**

An inspection shall be performed each calendar quarter of the scrubbers. Defective scrubber part(s) shall be replaced. **Inspections required by this condition shall not be performed in consecutive months.** A record shall be kept of the results of the inspection.

**Change 22:**

The first sentence of the Quarterly Deviation and Compliance Monitoring Report was deleted because it poses a conflict with the provisions that require an annual certification. IDEM, OAQ was not intending to turn this quarterly report into a compliance certification.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: RMG Foundry, LLC d/b/a RMG Foundry  
Source Address: 500 South Union Street, Mishawaka, Indiana 46544  
Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544  
Part 70 Permit No.: T 141-6087-00007

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

**Change 23:**

The first box on the Emergency Occurrence Report form was revised to include the word “working” in order to be consistent with 326 IAC 2-7-16(b)(5) and the Emergency Provision.

**This form consists of 2 pages**

**Page 1 of 2**

- 9 This is an emergency as defined in 326 IAC 2-7-1(12)
- C The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
  - C The Permittee must submit notice in writing or by facsimile within two (2) **working** days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

**Change 24:**

In addition to deleting Condition D.6.2(c) in Response 23, IDEM, OAQ has deleted all references to previous permit conditions that have been replaced or rescinded due to non-applicability of these previous permit conditions. Specifically, Conditions D.3.4, D.5.2, D.5.4 and D.6.5 have been deleted as follows and all subsequent Conditions and internal cross-references have been re-numbered:

~~D.3.4 Non-Applicability of Previous Permit Condition [326 IAC 6-3]~~

~~The requirement from CP 141-3867-00007, issued September 20, 1994, that established a 4.5 pound per hour PM allowable rate for the wire feed system for inoculation of ductile iron is not applicable because the equipment has been removed from service and 326 IAC 6-3 is not applicable to facilities at this source.~~

~~D.5.2 Non-Applicability of Previous Permit Condition [326 IAC 6-3]~~

~~The requirement from CP 141-4010-00007, issued August 30, 1995 Condition 5, that rendered 326 IAC 6-1-2 not applicable and compliance with the 2.26 pounds per hour limit shall also satisfy the conditions of 326 IAC 6-3-2 is not applicable since 326 IAC 6-1 is the applicable rule.~~

~~D.5.4 Non-Applicability of Previous Permit Condition [326 IAC 6-1-18]~~

~~The requirement of 326 IAC 6-1-18, that established a 0.096 grains per dry standard cubic foot of exhaust air limit and a 3.44 tons per year PM limit for shot blast cleaning machine (38P) is not applicable because the equipment has been removed from service at this source.~~

~~D.6.5 Non-Applicability of Previous Permit Condition [326 IAC 6-1-18]~~

~~The requirement from 326 IAC 6-1-18 that requires that PM emissions from the standby coal-fired boiler (36P) be limited to 0.498 pounds million British thermal units and 3.39 tons per year is not applicable because this standby coal-fired boiler has been removed from service at this source.~~

**Change 25:**

Condition D.2.5(b) has had the word “baghouses” made singular since the facilities all share a single baghouse for PM control, known as East Foundry B/H.

D.2.5 Particulate Matter (PM)

- (b) In order to comply with Conditions D.2.2 and D.2.3, the baghouses for PM control shall be in operation and control emissions from the shakeout operation, known as EU 2-3, from the

sand handling operation, known as EU 2-4, and the new sand silo, known as EU 2-6, at all times that the shakeout, sand handling processes and the new sand silo are in operation.

**Change 26:**

Condition D.6.5 has been clarified as follows:

**D.6.5 Natural Gas Fuel Use**

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**In order to demonstrate compliance with Condition D.6.4(e),** the two (2) boilers, known as EU 10-1 and EU 10-2, shall **burn** only ~~use~~ natural gas for fuel combustion.

## Appendix A: Potential Emission Calculations

Company Name: RMG Foundry, LLC d/b/a RMG Foundry  
Address City IN Zip: 500 South Union Street, Mishawaka, Indiana 46544  
Part 70: T 141-6087  
Pit ID: T 141-00007  
Reviewer: Mark L. Kramer  
Date: June 6, 1996

## Melting Area

Emission Unit	EU 1-1 Electric Induction Furnace		25,000 cfm			Capture Efficiency		95.0%	
	Three @ 7.0 tons per hour, each		S/V: Stack 47 (31P) - Induction Furnace Hoods			c1974			
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission 326 IAC 6-1-18 (tons/yr)	(gr/dscf)
PM	21.0	0.90	18.9	82.8	0.0%	18.9	82.8	37.5	0.09
PM-10	21.0	0.86	18.1	79.1	0.0%	18.1	79.1		
SO <sub>2</sub>	21.0	0.00	0.00	0.00	0.0%	0.00	0.00		
NO <sub>x</sub>	21.0	0.00	0.00	0.00	0.0%	0.00	0.00		
VOC	21.0	0.00	0.00	0.00	0.0%	0.00	0.00		
CO	21.0	0.00	0.00	0.00	0.0%	0.00	0.00		
Lead	21.0	0.100	2.10	9.20	0.0%	2.10	9.20		
Mn	21.0	0.0225	0.473	2.07	0.0%	0.473	2.07		

Emission Factors for PM & PM-10 from AP-42, Section 12.10, Table 12.10-3 and for Pb and Mn from FIRES 6.2, SCC 03-04-003-03  
Limited emissions of 37.5 tons per year of PM is equivalent to a melt throughput of no greater than 83,333 tons per consecutive twelve (12) month period.  
Limited emissions of 0.09 grains per dry standard cubic foot per minute.

Emission Unit	EU 1-2 Magnesium Treatment / Inoculation		25,000 cfm			Capture Efficiency		95.0%	
	S/V: General Ventilation		c before 1974						
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)	
PM	7.0	1.80	12.6	55.2	0.0%	12.6	55.2	0.03	
PM-10	7.0	1.80	12.6	55.2	0.0%	12.6	55.2		
SO <sub>2</sub>	7.0	0.00	0.00	0.00	0.0%	0.000	0.000		
NO <sub>x</sub>	7.0	0.00	0.00	0.00	0.0%	0.000	0.000		
VOC	7.0	0.00500	0.0350	0.153	0.0%	0.0350	0.153		
CO	7.0	0.00	0.00	0.00	0.0%	0.000	0.000		
Lead	7.0	0.000	0.00	0.00	0.0%	0.000	0.000		
Mn	7.0	0.000	0.00	0.00	0.0%	0.000	0.000		

Emission Factors for PM & PM-10 from AP-42, Section 12.10, Table 12.10-7 and for VOC from FIRES 6.2, SCC 03-04-003-10

**Melting Area**

Emission Unit	EU 1-3 Melt Deck - Charge Handling S/V: General Ventilation c1974							
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
Pollutant								
PM	21.0	0.400	8.40	36.8	0.0%	8.40	36.8	0.030
PM-10	21.0	0.360	7.56	33.1	0.0%	7.56	33.1	
SO2	21.0	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	21.0	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	21.0	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	21.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	21.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	21.0	0.00	0.00	0.00	0.0%	0.00	0.00	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 - Partial Preheater EF

Emission Unit	EU 1-4 Melt Deck - Preheating S/V: Stack 50 - Preheater Baghouse c1995							
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
Pollutant								
PM	21.0	0.2	4.20	18.4	99.0%	0.0836	0.366	0.030
PM-10	21.0	0.2	4.20	18.4	99.0%	0.0836	0.366	
SO2	21.0	0.00	0.00	0.00	0.0%	0.000	0.000	
NOx	21.0	0.00	0.00	0.00	0.0%	0.000	0.000	
VOC	21.0	0.00	0.00	0.00	0.0%	0.000	0.000	
CO	21.0	0.00	0.00	0.00	0.0%	0.000	0.000	
Lead	21.0	0.00	0.00	0.00	0.0%	0.000	0.000	
Mn	21.0	0.00	0.00	0.00	0.0%	0.000	0.000	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 - Remainder from Preheater EF

East Foundry Area

Department #24

Emission Unit	EU 2-1 Large Pinlift Casting Pouring and Cooling S/V: General Ventilation c1975							
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
Pollutant								
PM	5.00	4.2	21.0	92.0	0.0%	21.0	92.0	0.03
PM-10	5.00	2.06	10.3	45.1	0.0%	10.3	45.1	
SO2	5.00	0.02	0.10	0.438	0.0%	0.100	0.438	
NOx	5.00	0.01	0.050	0.219	0.0%	0.0500	0.219	
VOC	5.00	0.140	0.700	3.07	0.0%	0.700	3.07	
CO	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 (PM)  
PM-10 from Particle size distribution in AP-42 Emission Factors, Section 12.10, Table 12.10-8 (PM-10)  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

Emission Unit	EU 2-2 Small Pinlift Casting Pouring and Cooling S/V: General Ventilation c1975							
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
Pollutant								
PM	5.00	4.2	21.0	92.0	0.0%	21.0	92.0	0.03
PM-10	5.00	2.06	10.3	45.1	0.0%	10.3	45.1	
SO2	5.00	0.02	0.100	0.438	0.0%	0.100	0.438	
NOx	5.00	0.01	0.050	0.219	0.0%	0.050	0.219	
VOC	5.00	0.14	0.700	3.07	0.0%	0.700	3.07	
CO	5.00	0.00	0.00	0.00	0.0%	0.000	0.00	
Lead	5.00	0.00	0.00	0.00	0.0%	0.000	0.00	
Mn	5.00	0.00	0.00	0.00	0.0%	0.000	0.00	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 for PM  
PM-10 from Particle size distribution in AP-42 Emission Factors, Section 12.10, Table 12.10-8 (PM-10)  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

East Foundry Area

Department #24

Emission Unit	EU 2-3 East Casting Shakeout		33,000 cfm			Capture Efficiency		Allowable Emission 326 IAC 6-1-2 (gr/dscf)
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	
								98.0%
Pollutant								
PM	7.00	3.20	22.4	98.1	99.0%	0.668	2.924	0.03
PM-10	7.00	2.24	15.7	68.7	99.0%	0.467	2.047	
SO2	7.00	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	7.00	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	7.00	1.20	8.40	36.8	0.0%	8.40	36.8	
CO	7.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	7.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	7.00	0.00	0.00	0.00	0.0%	0.00	0.00	

AIRS SCC 3-04-003-31

Emission Unit	EU 2-4 East Sand Handling		33,000 cfm			Capture Efficiency		Limited Emission 326 IAC 6-1-18 (tons/yr)	(gr/dscf)
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)		
Pollutant									
PM	50.0	3.60	180	788	99.0%	3.58	15.69	3.16	0.01
PM-10	50.0	0.540	27.0	118	99.0%	0.537	2.35		
SO2	50.0	0.00	0.00	0.00	0.0%	0.00	0.00		
NOx	50.0	0.00	0.00	0.00	0.0%	0.00	0.00		
VOC	50.0	0.00	0.00	0.00	0.0%	0.00	0.00		
CO	50.0	0.00	0.00	0.00	0.0%	0.00	0.00		
Lead	50.0	0.00	0.00	0.00	0.0%	0.00	0.00		
Mn	50.0	0.00	0.00	0.00	0.0%	0.00	0.00		

Emission Factors for PM from AP-42, Section 12.10, Table 12.10-7 & PM-10 AIRS SCC 3-04-003-50  
 Limited emissions of 3.16 tons per year of PM after control is equivalent to  
 a throughput of no greater than 177,329 tons of sand per consecutive twelve (12) month period.  
 3.16 TPY of stack PM emissions > 177,329 x 3.6 lbs PM/ton sand x 0.99 cap x 1 ton/2000 lb x (1 - 0.99 control)

East Foundry Area

Department #24

Emission Unit	EU 2-5 East Premix Silo		S/V: Stack 15 900 cfm			Capture Efficiency		99.9%
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	
<b>Significant: PM10 &gt; 25 lbs/day c1979</b>								
Pollutant								Allowable Emission 326 IAC 6-1-2 (gr/dscf)
PM	5.0	0.270	1.35	5.91	99.0%	0.0148	0.0650	0.03
PM-10	5.0	0.270	1.35	5.91	99.0%	0.0148	0.0650	
SO2	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10

Emission Unit	EU 2-6 East New Sand Bin Silo		S/V: Stack 49 - East Foundry Baghouse 33,000 cfm			Capture Efficiency		99.9%
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	
<b>c1974</b>								
Pollutant								Allowable Emission 326 IAC 6-1-2 (gr/dscf)
PM	20.0	0.270	5.40	23.7	99.0%	0.0593	0.260	0.03
PM-10	20.0	0.270	5.40	23.7	99.0%	0.0593	0.260	
SO2	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10

East Foundry Area

Department #24

Emission Unit	EU 2-7 Floor Molding Casting Pouring and Cooling S/V: General Ventilation c before 1895							
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
PM	1.00	4.20	4.20	18.4	0.0%	4.20	18.4	0.03
PM-10	1.00	2.06	2.06	9.02	0.0%	2.06	9.02	
SO2	1.00	0.02	0.02	0.088	0.0%	0.02	0.088	
NOx	1.00	0.0100	0.0100	0.0438	0.0%	0.0100	0.0438	
VOC	1.00	0.140	0.140	0.613	0.0%	0.140	0.613	
CO	1.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	1.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	1.00	0.00	0.00	0.00	0.0%	0.00	0.00	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 for PM and PM-10  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

South Foundry Area

Department #26

Emission Unit	EU 3-1 Pinlift Casting Pouring and Cooling S/V: General Ventilation c1959							
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
Pollutant								
PM	5.00	4.20	21.0	92.0	0.0%	21.0	92.0	0.03
PM-10	5.00	2.06	10.3	45.1	0.0%	10.3	45.1	
SO2	5.00	0.02	0.10	0.438	0.0%	0.10	0.438	
NOx	5.00	0.0100	0.0500	0.219	0.0%	0.0500	0.219	
VOC	5.00	0.140	0.700	3.07	0.0%	0.700	3.07	
CO	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 for PM and PM-10  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

Emission Unit	EU 3-2 Slinger Casting Pouring and Cooling S/V: General Ventilation c1959							
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
Pollutant								
PM	5.00	4.20	21.0	92.0	0.0%	21.0	92.0	0.03
PM-10	5.00	2.06	10.3	45.1	0.0%	10.3	45.1	
SO2	5.00	0.02	0.10	0.438	0.0%	0.10	0.438	
NOx	5.00	0.01	0.0500	0.219	0.0%	0.0500	0.219	
VOC	5.00	0.14	0.700	3.07	0.0%	0.700	3.07	
CO	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 for PM and PM-10  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

South Foundry Area

Department #26

Emission Unit	EU 3-3 South Casting Shakeout					27,000 cfm		Capture Efficiency	98.0%
	S/V: Stack 44 (34P) - South Foundry Shakeout Baghouse c1979								
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission (tons/yr)	(gr/dscf)
PM	8.50	3.20	27.2	119	99.0%	0.811	3.55	5.17	0.012
PM-10	8.50	2.24	19.0	83.4	99.0%	0.567	2.49		
SO2	8.50	0.00	0.00	0.00	0.0%	0.00	0.00		
NOx	8.50	0.00	0.00	0.00	0.0%	0.00	0.00		
VOC	8.50	1.20	10.2	44.7	0.0%	10.2	44.7	40.00	
CO	8.50	0.00	0.00	0.00	0.0%	0.00	0.00		
Lead	8.50	0.00	0.00	0.00	0.0%	0.00	0.00		
Mn	8.50	0.00	0.00	0.00	0.0%	0.00	0.00		

AIRS SCC 3-04-003-31

Limited emissions of less than 40 tons per year of VOC is equivalent to a throughput of less than 66,666 tons of iron castings per consecutive twelve (12) month period.

Emission Unit	EU 3-4 South Sand Handling					27,500 cfm		Capture Efficiency	99.0%
	S/V: Stack 51 (33P) - South Foundry Sand System Baghouse c1959								
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission (tons/yr)	(gr/dscf)
PM	60.0	3.60	216	946	99.0%	4.30	18.83	6.66	0.017
PM-10	60.0	0.540	32.4	142	99.0%	0.645	2.82		
SO2	60.0	0.00	0.00	0.00	0.0%	0.00	0.00		
NOx	60.0	0.00	0.00	0.00	0.0%	0.00	0.00		
VOC	60.0	0.00	0.00	0.00	0.0%	0.00	0.00		
CO	60.0	0.00	0.00	0.00	0.0%	0.00	0.00		
Lead	60.0	0.00	0.00	0.00	0.0%	0.00	0.00		
Mn	60.0	0.00	0.00	0.00	0.0%	0.00	0.00		

PM AP-42, Section 12.10, Table 12.10-7 & PM10 AAIRS SCC 3-04-003-50

Limited emissions of 6.66 tons per year of PM after control is equivalent to a throughput of no greater than 373,737 tons of sand per consecutive twelve (12) month period based on a stack control of 99.0% 6.66 TPY of stack PM emissions > 373,737 tons of sand x 3.6 lbs PM/ton sand x 0.99 cap x 1 ton/2000 lb x (1 - 0.99 control)

South Foundry Area

Department #26

Emission Unit	EU 3-5 South Sand Hopper Bin S/V: General Ventilation c1986		INSIGNIFICANT: PM10 < 5lbs/hr and 25 lbs/day					
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
Pollutant								
PM	1.80	0.0200	0.0360	0.158	0.0%	0.0360	0.158	0.03
PM-10	1.80	0.0100	0.0180	0.0788	0.0%	0.0180	0.0788	
SO2	1.80	0.00	0.00	0.00	0.0%	0.000	0.000	
NOx	1.80	0.00	0.00	0.00	0.0%	0.000	0.000	
VOC	1.80	0.00	0.00	0.00	0.0%	0.000	0.000	
CO	1.80	0.00	0.00	0.00	0.0%	0.000	0.000	
Lead	1.80	0.00	0.00	0.00	0.0%	0.000	0.000	
Mn	1.80	0.00	0.00	0.00	0.0%	0.000	0.000	

AIRS 3-05-011-10

Emission Unit	EU 3-6 South and Middle Premix Silo S/V: Stack 38 Bin Vent - bin vent filters c1979		900 cfm			Capture Efficiency		Allowable Emission 326 IAC 6-1-2 (gr/dscf)
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	
Pollutant								
PM	20.0	0.270	5.40	23.7	99.0%	0.0593	0.260	0.03
PM-10	20.0	0.270	5.40	23.7	99.0%	0.0593	0.260	
SO2	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10

South Foundry Area

Department #26

Emission Unit	EU 3-7 North SPO Casting Pouring and Cooling S/V: General Ventilation c1959							
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
Pollutant								
PM	5.00	4.20	21.0	92.0	0.0%	21.0	92.0	0.03
PM-10	5.00	2.06	10.3	45.1	0.0%	10.3	45.1	
SO2	5.00	0.02	0.10	0.438	0.0%	0.10	0.438	
NOx	5.00	0.01	0.0500	0.219	0.0%	0.0500	0.219	
VOC	5.00	0.14	0.700	3.07	0.0%	0.700	3.07	
CO	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 for PM and PM-10  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

Emission Unit	EU 3-8 South SPO Pouring and Cooling S/V: General Ventilation c1959							
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
Pollutant								
PM	5.00	4.20	21.0	92.0	0.0%	21.0	92.0	0.03
PM-10	5.00	2.06	10.3	45.1	0.0%	10.3	45.1	
SO2	5.00	0.02	0.10	0.438	0.0%	0.10	0.438	
NOx	5.00	0.0100	0.0500	0.219	0.0%	0.0500	0.219	
VOC	5.00	0.140	0.700	3.07	0.0%	0.700	3.07	
CO	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	5.00	0.00	0.00	0.00	0.0%	0.00	0.00	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 for PM and PM-10  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

Middle Foundry Area

Department #30

Emission Unit	EU 4-1 Hunter Casting Pouring and Cooling S/V: Stack 46 - Middle Foundry Baghouse c1992, Molding replaced in 2000					40,500 cfm	Capture Efficiency		99.0%
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)		Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	
Pollutant									326 IAC 6-1-2
PM	7.50	4.20	31.5	138	99.0%	0.627	2.75		0.03
PM-10	7.50	2.06	15.5	67.7	99.0%	0.307	1.347		
SO2	7.50	0.02	0.15	0.657	0.0%	0.15	0.657		
NOx	7.50	0.0100	0.0750	0.329	0.0%	0.0750	0.329		
VOC	7.50	0.140	1.05	4.60	0.0%	1.05	4.60		
CO	7.50	0.00	0.00	0.00	0.0%	0.00	0.00		
Lead	7.50	0.00	0.00	0.00	0.0%	0.00	0.00		
Mn	7.50	0.00	0.00	0.00	0.0%	0.00	0.00		

Emission Factors from AP-42, Section 12.10, Table 12.10-7 for PM and PM-10  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

Emission Unit	EU 4-2a Sinto Casting Pouring S/V: General Ventilation c1998					Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission (gr/dscf)	Limited Pursuant to 326 IAC 2-2 (tons/yr)
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Uncontrolled Emission Rate (tons/yr)					
Pollutant										
PM	6.00	2.80	16.8	73.6	0.0%	16.8	73.6	0.03		<37.4
PM-10	6.00	1.37	8.22	36.0	0.0%	8.22	36.0			18.3
SO2	6.00	0.02	0.120	0.526	0.0%	0.12	0.526			
NOx	6.00	0.0100	0.0600	0.263	0.0%	0.0600	0.263			
VOC	6.00	0.140	0.840	3.68	0.0%	0.840	3.68			
CO	6.00	0.00	0.00	0.00	0.0%	0.00	0.00			
Lead	6.00	0.00	0.00	0.00	0.0%	0.00	0.00			
Mn	6.00	0.00	0.00	0.00	0.0%	0.00	0.00			

Emission Factors for PM & PM-10 AP-42, Section 12.10, Table 12.10-7 partial factors, remainder in EU 4-2b  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

Middle Foundry Area

Department #30

Emission Unit	EU 4-2b Sinto Casting Cooling S/V: Stack 46 - Middle Foundry Baghouse c1998					40,500 cfm	Capture Efficiency		99.0%	
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)		Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)	Limited Pursuant to 326 IAC 2-2 (tons/yr)
PM	6.00	1.40	8.40	36.8	99.0%	0.1672	0.732	0.03	<0.187	
PM-10	6.00	0.690	4.14	18.1	99.0%	0.0824	0.361		0.092	
SO2	6.00	0.00	0.00	0.00	0.0%	0.00	0.00			
NOx	6.00	0.00	0.00	0.00	0.0%	0.00	0.00			
VOC	6.00	0.00	0.00	0.00	0.0%	0.00	0.00			
CO	6.00	0.00	0.00	0.00	0.0%	0.00	0.00			
Lead	6.00	0.00	0.00	0.00	0.0%	0.00	0.00			
Mn	6.00	0.00	0.00	0.00	0.0%	0.00	0.00			

Emission Factors for PM & PM-10 AP-42, Section 12.10, Table 12.10-7 partial factors, remainder in EU 4-2a

Emission Unit	EU 4-3 Middle Foundry Shakeout S/V: Stack 46 - Middle Foundry Baghouse c1951					40,500 cfm	Capture Efficiency		98.0%	
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)		Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)	
PM	15.0	3.20	48.0	210	99.0%	1.430	6.27	0.03		
PM-10	15.0	2.24	33.6	147	99.0%	1.001	4.39			
SO2	15.0	0.00	0.00	0.00	0.0%	0.00	0.00			
NOx	15.0	0.00	0.00	0.00	0.0%	0.00	0.00			
VOC	15.0	1.20	18.0	78.8	0.0%	18.0	78.8			
CO	15.0	0.00	0.00	0.00	0.0%	0.00	0.00			
Lead	15.0	0.00	0.00	0.00	0.0%	0.00	0.00			
Mn	15.0	0.00	0.00	0.00	0.0%	0.00	0.00			

AIRS SCC 3-04-003-31

Middle Foundry Area

Department #30

Emission Unit	EU 4-4 Middle Sand Handling		40,500 cfm			Capture Efficiency		Allowable Emission 326 IAC 6-1-2 (gr/dscf)
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	
								99.0%
	S/V: Stack 46 - Middle Foundry Baghouse c before 1974							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
PM	70.0	3.60	252	1104	99.0%	5.01	22.0	0.03
PM-10	70.0	0.540	37.8	166	99.0%	0.752	3.29	
SO2	70.0	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	70.0	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	70.0	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	70.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	70.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	70.0	0.00	0.00	0.00	0.0%	0.00	0.00	

Emission Factor from AP-42, Section 12.10, Table 12.10-7 for PM and from AIRS SCC 3-04-003-50 for PM-10

Emission Unit	EU 4-5 Middle Sand Hopper Bin		INSIGNIFICANT: PM10 < 5 lbs/day and 25 lbs/day					Allowable Emission 326 IAC 6-1-2 (gr/dscf)
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	
	S/V: General Ventilation c before 1974							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
PM	2.1	0.0200	0.0420	0.184	0.0%	0.0420	0.184	0.03
PM-10	2.1	0.0100	0.0210	0.0920	0.0%	0.0210	0.0920	
SO2	2.1	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	2.1	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	2.1	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	2.1	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	2.1	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	2.1	0.00	0.00	0.00	0.0%	0.00	0.00	

AIRS 3-05-011-10

Middle Foundry Area

Department #30

Emission Unit	EU 4-7 Sinto Molding Pouring and Cooling		40,500 cfm		Capture Efficiency		Allowable Emission	
	S/V: Stack 46 - Middle Foundry Baghouse c2001		Uncontrolled	Uncontrolled	Controlled	Controlled		
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)	Collection Efficiency (%)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)	326 IAC 6-1-2 (gr/dscf)
PM	8.00	4.20	33.60	147.2	99.0%	0.672	2.94	0.03
PM-10	8.00	2.06	16.48	72.2	99.0%	0.330	1.44	
SO2	8.00	0.02	0.160	0.701	0.0%	0.160	0.701	
NOx	8.00	0.01	0.0800	0.3504	0.0%	0.0800	0.3504	
VOC	8.00	0.14	1.120	4.906	0.0%	1.120	4.906	
CO	8.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	8.00	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	8.00	0.00	0.00	0.00	0.0%	0.00	0.00	

Emission Factors from AP-42, Section 12.10, Table 12.10-7 for PM and PM-10  
SO2, NOx and VOC Emission Factors from FIRES 6.2, SCC 03-04-003-20

Cleaning and Finishing

Department #29

Emission Unit	EU 5-1 Three (3) Blasters (Wheel Blast, Rail Blast & #1 Spinner Hanger) S/V: Stack 43 (37P) - Wheelabrator Baghouse c1960 - 1981						18,500 cfm		Capture Efficiency	99.9%
	Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission 326 IAC 6-1-18 (tons/yr)	(gr/dscf)
PM	9.0	15.5	140	611	99.7%	0.558	2.442	5.50	0.015	
PM-10	9.0	1.70	15.3	67.0	99.7%	0.061	0.268			
SO2	9.0	0.00	0.00	0.00	0.0%	0.00	0.00			
NOx	9.0	0.00	0.00	0.00	0.0%	0.00	0.00			
VOC	9.0	0.00	0.00	0.00	0.0%	0.00	0.00			
CO	9.0	0.00	0.00	0.00	0.0%	0.00	0.00			
Lead	9.0	0.00	0.00	0.00	0.0%	0.00	0.00			
Mn	9.0	0.00	0.00	0.00	0.0%	0.00	0.00			

AIRS SCC 3-040003-40 (split emission factors based on "An Inventory of Iron Foundry Emissions," Modern Casting, 1/72)  
PM stack emissions based on a max. capacity of 9.0 TPH with a minimum control efficiency of 99.1%  
and the stated capture efficiency of 99.9% comply with 326 IAC 6-1-18 limit of 5.5 TPY.  
611 tons/yr of PM\*0.999 cap\*(1 - 0.991 control) = less than 5.5 tons per year

Emission Unit	EU 5-3 Grinding/Cleaning Operation S/V: Stack 42 (32P) - Grinding Baghouse c before 1974						27,000 cfm		Capture Efficiency	95.0%
	Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission 326 IAC 6-1-18 (tons/yr)	(gr/dscf)
PM	13.65	1.6	21.840	95.7	99.0%	1.299	5.692	5.50	0.001	
PM-10	13.65	1.6	21.840	95.7	99.0%	1.299	5.692			
SO2	13.65	0.00	0.00	0.00	0.0%	0.00	0.00			
NOx	13.65	0.00	0.00	0.00	0.0%	0.00	0.00			
VOC	13.65	0.00	0.00	0.00	0.0%	0.00	0.00			
CO	13.65	0.00	0.00	0.00	0.0%	0.00	0.00			
Lead	13.65	0.00	0.00	0.00	0.0%	0.00	0.00			
Mn	13.65	0.00	0.00	0.00	0.0%	0.00	0.00			

AIRS SCC 3-040003-40 (split emission factors based on "An Inventory of Iron Foundry Emissions," Modern Casting, 1/72)  
PM stack emissions based on a max. capacity of 13.65 TPH with a minimum control efficiency of 94%  
and the stated capture efficiency of 95% comply with 326 IAC 6-1-18 limit of 5.5 TPY.  
95.7 tons/yr of PM\*0.95 cap\*(1 - 0.94 control) = less than 5.5 tons per year

Cleaning and Finishing Department #29

Emission Unit	EU 5-4 One (1) Blaster (#2 spinner hanger) S/V: Stack 5 - #2 Spinner Hanger Baghouse c 1974, replaced in 1991					2,500 cfm	Capture Efficiency	99.9%
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)			
PM	4.5	15.5	69.8	306	99.7%	0.279	1.221	0.03
PM-10	4.5	1.70	7.65	33.5	99.7%	0.0306	0.134	
SO2	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	

AIRS SCC 3-040003-40 (split emission factors based on "An Inventory of Iron Foundry Emissions," Modern Casting, 1/72)

Emission Unit	EU 5-6 Two (2) Tumblasts S/V: Stack 45 - Tumblast Baghouse c before 1968					10,000 cfm	Capture Efficiency	99.9%
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)			
PM	4.5	17.0	76.5	335	99.7%	0.306	1.339	0.03
PM-10	4.5	1.70	7.65	33.5	99.7%	0.0306	0.134	
SO2	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	4.5	0.00	0.00	0.00	0.0%	0.00	0.00	

AIRS SCC 3-040003-40

Emission Unit	EU 6-5 Source Solvent Usage S/V: General Ventilation					Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)				
PM	0.0	0.0	0.00	0.00	0.0%	0.00	0.00	
PM-10	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
SO2	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	10.0	1.00	10.00	43.8	0.0%	10.00	43.8	
CO	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	

Based on usage

**Core Making Department #27**

Emission Unit	EU 7-1 Muller Sand Silo		900 cfm			Capture Efficiency	99.9%	Allowable Emission
	S/V: Stack 11 bin vent - Core Room Sand Tank - bin vent filters c prior to 1968		Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)			
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)	Collection Efficiency (%)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)	
PM	20.0	0.27	5.40	23.7	99.0%	0.0593	0.260	0.03
PM-10	20.0	0.27	5.40	23.7	99.0%	0.0593	0.260	
SO2	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10

Emission Unit	EU 7-4a One (1) Iso-Set Core Making Process		S/V: General Ventilation			PM Capture Efficiency	99.9%	Allowable Emission	Limited Controlled Emission Rate
	S/V: General Ventilation c1979		Consisting of four (4) Gaylord Machines						
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)		
PM/PM-10	4.50	0.27	1.22	5.32	98.9%	0.0146	0.0638	0.03	0.0289
SO2/VOC	162.0	0.770	125	546	99.92%	0.100	0.437		0.1980
PM	4.50	0.27	1.22	5.32	98.9%	0.0146	0.0638		0.0289
PM-10	4.50	0.27	1.22	5.32	98.9%	0.0146	0.0638		0.0289
SO2	162.0	0.770	125	546	99.92%	0.100	0.437		0.1980
NOx	0.0	0.00	0.00	0.00	0.0%	0.00	0.00		0.0000
VOC	4.5	2.800	12.6	55.2	0.0%	12.6	55.2		<25*
CO	0.0	0.00	0.00	0.00	0.0%	0.00	0.00		0.0000
Lead	0.0	0.00	0.00	0.00	0.0%	0.00	0.00		0.0000
Mn	0.0	0.00	0.00	0.00	0.0%	0.00	0.00		0.0000

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10

\* total with EU 7-8 & EU 7-4a

Applicant supplied emission factors for max usage rate of SO2 and VOC calculated from MSDS as follows:

Sand Usage 4.5 tons/hr and Resin usage 1.4% of sand or 126 lbs/hr Only 10% of resin is VOC, therefore 12.6 lbs/hr or 2.80 lbs/ton of sand

Emission Unit	EU 7-4b One (1) Laempe LL30 Core Machine		S/V: General Ventilation			PM Capture Efficiency	99.9%	Allowable Emission	Limited Controlled Emission Rate
	S/V: General Ventilation c 2000 by 141-12444		Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)				
Pollutant	Maximum Rate (tons/hr) of Sand	Emission Factor (lbs/tons)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)	Collection Efficiency (%)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)		
PM	3.0	0.27	0.81	3.55	98.9%	0.0089	0.0390	0.03	0.0265
PM-10	3.0	0.27	0.81	3.55	98.9%	0.0089	0.0390		0.0265
SO2	3.0	15.0	45	197	99.80%	0.090	0.394		<40
NOx	3.0	0.00	0.00	0.00	0.0%	0.00	0.00		0.0000
VOC	3.0	2.80	8.4	36.8	0.0%	8.4	36.8		<25*
CO	3.0	0.00	0.00	0.00	0.0%	0.00	0.00		0.0000
Lead	0.0	0.00	0.00	0.00	0.0%	0.00	0.00		0.0000
Mn	0.0	0.00	0.00	0.00	0.0%	0.00	0.00		0.0000

Isopropobenzene 3.0 0.43 1.29 5.65 0.0% 1.29 5.65 3.84

\* total with EU 7-8 & EU 7-4a

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10, SO2 max usage rate The amount of resin is limited to 250 tons per year with a VOC content not to exceed 10% by weight to render the requirements of 326 IAC 8-1-6 not applicable. Resin usage 1.4% of sand or 84 lbs/hr Only 10% of resin is VOC, therefore 8.4 lbs/hr or 2.80 lbs/ton of sand

Core Making Department #27

**Emission Unit** EU 7-5 One (1) Pep-Set Coring Operation  
S/V: Stack 58 - exhausted through EU 7-6 (Stack 58A)  
c1985

Pollutant	Maximum Rate (lbs/hr)	Emission Factor (lbs/lb)	Uncontrolled		Collection Efficiency (%)	Controlled		Limited Controlled Emission Rate (tons/yr)
			Emission Rate (lbs/hr)	Emission Rate (tons/yr)		Emission Rate (lbs/hr)	Emission Rate (tons/yr)	
PM	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
PM-10	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
SO2	0.0	0.00	0.00	0.00	0.00%	0.00	0.00	
NOx	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Resin (1)	167.0	0.490	81.8	358	0.0%	81.8	358	
Resin (2)	137.0	0.390	53.4	234	0.0%	53.4	234	
Resin (3)	9.0	0.750	6.75	29.6	0.0%	6.75	29.6	
<b>Resin (all)</b>	<b>n/a</b>	<b>n/a</b>	<b>142</b>	<b>622</b>	<b>0.0%</b>	<b>142</b>	<b>622</b>	< 25
CO	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	0.0	0.00	0.00	0.00	0.0%	0.00	0.00	

Resin usage limited such that Resin 1 \* .490 + Resin 2 \* .390 + Resin 3 \* .750 is less than 25 ton/yr.

VOC content of resins from resin MSDSs

Resin limits required to limit VOC to less than 25 TPY to render the requirements of 326 IAC 8-1-6 and 326 IAC 2-2 not applicable.

**Emission Unit** EU 7-6 Sand Silo - South and Middle Foundries  
S/V: Stack 58A - bin vent filter  
c1979

1,400 cfm Capture Efficiency 99.9%

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled		Collection Efficiency (%)	Controlled		Allowable Emission 326 IAC 6-1-2 (gr/dscf)
			Emission Rate (lbs/hr)	Emission Rate (tons/yr)		Emission Rate (lbs/hr)	Emission Rate (tons/yr)	
PM	29.0	0.27	7.83	34.3	99.0%	0.0861	0.377	0.03
PM-10	29.0	0.27	7.83	34.3	99.0%	0.0861	0.377	
SO2	29.0	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	29.0	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	29.0	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	29.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	29.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	29.0	0.00	0.00	0.00	0.0%	0.00	0.00	

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10

**Core Making Department #27**

Emission Unit	EU 7-7 Sand Silo - pepset/isoset		S/V: Stack 58 - bin vent filter			900 cfm	Capture Efficiency	99.9%
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Collection Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Allowable Emission 326 IAC 6-1-2 (gr/dscf)
PM	20.0	0.270	5.40	23.7	99.0%	0.0593	0.260	0.03
PM-10	20.0	0.270	5.40	23.7	99.0%	0.0593	0.260	
SO2	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
NOx	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
VOC	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
CO	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Lead	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	
Mn	20.0	0.00	0.00	0.00	0.0%	0.00	0.00	

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10

**Emission Unit 7-8 Two Shellco Core Machines**

Throughput Limited to 17,858 tons of sand per year to render the requirements of 326 IAC 8-1-6 not applicable and this limit includes the sand for the Lampe Core Machine permitted by SSM 141-13749-00007, issued on March 23, 2001

Pollutant	Total	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited
	Maximum Rate (tons/hr)							Controlled Emission Rate (tons/yr)
PM	5.0	0.27	1.35	5.91	98.9%	0.015	0.065	0.0265
PM-10	5.0	0.27	1.350	5.913	98.9%	0.015	0.065	0.0265
SO2	5.0	15.00	75.00	328.50	99.8%	0.15	0.657	0.2679
NOx	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	0.0000
VOC	5.0	2.80	14.00	61.32	0.0%	14.00	61.32	<25
CO	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	0.0000
Isopropbenzene	5.0	0.43	2.15	9.42	0.0%	2.15	9.42	3.8395

Total with EU 7-4(b)

Sand Usage 5.0 tons/hour PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10

Resin Usage 1.4% of Sand or 140 pounds/hr  
SO2 Usage 15 pounds/ton of sand or 75 pounds/hr

Binder Epoxy/SO2

See EU 7-4(b) for combined resin limit and VOC content limit of the resins.

	% Reacted	% Evaporated	% Remaining in Mold/Core
Cumene Hydroperoxide	90	0	10
Isopropylbenzene (cumene)	0	50	50

Only 10% of both resin is VOC, therefore VOC emission factor is 10% of 140 pounds/hr or 2.80 pounds/ton of sand  
2.14 lbs/hr cumene = 5.89% by weight of Resin 4342 which is 52% of total & 50% is evaporated times resin use per hour (140 lbs/hr)

**Emission Unit EU 5-2 Foundry Paint Booth S/V: Stack 100 - Dry Filters**  
See TSD App.A pages 23 and 24 of 25  
c prior to 1968

**Emission Unit EU 10-1 & EU 10-2 Natural Gas Boiler #1 & #2 (16.4 MMBtu/hr, each)**  
S/V: Stacks 88 & 88A  
See TSD App.A page 22 of 25  
c1968

Summary of Emissions

Uncontrolled Potential Emissions

Significant Emission Units	Uncontrolled Potential Emissions								
	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Lead (tons/yr)	Mn (tons/yr)	
EU 1-1	82.8	79.1	0.00	0.00	0.00	0.00	9.20	2.07	
EU 1-2	55.2	55.2	0.00	0.00	0.153	0.00	0.00	0.00	
EU 1-3	36.8	33.1	0.00	0.00	0.00	0.00	0.00	0.00	
EU 1-4	18.4	18.4	0.00	0.00	0.00	0.00	0.00	0.00	
EU 2-1	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 2-2	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 2-3	98.1	68.7	0.00	0.00	36.8	0.00	0.000	0.00	
EU 2-4	788	118	0.00	0.00	0.00	0.00	0.00	0.00	
EU 2-5	5.91	5.91	0.00	0.00	0.00	0.00	0.00	0.00	
EU 2-6	23.7	23.7	0.00	0.00	0.00	0.00	0.00	0.00	
EU 2-7	18.4	9.02	0.088	0.0438	0.613	0.00	0.00	0.00	
EU 3-1	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 3-2	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 3-3	119	83.4	0.00	0.00	44.7	0.00	0.000	0.00	
EU 3-4	946	142	0.00	0.00	0.00	0.00	0.00	0.00	
EU 3-5	0.158	0.0788	0.00	0.00	0.00	0.00	0.00	0.00	
EU 3-6	23.7	23.7	0.00	0.00	0.00	0.00	0.00	0.00	
EU 3-7	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 3-8	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 4-1	138	67.7	0.657	0.329	4.60	0.00	0.00	0.00	Isoproben
EU 4-2a	73.6	36.0	0.526	0.263	3.68	0.00	0.00	0.00	
EU 4-2b	36.8	18.1	0.00	0.00	0.00	0.00	0.00	0.00	
EU 4-3	210	147	0.00	0.00	78.8	0.00	0.00	0.00	
EU 4-4	1104	166	0.00	0.00	0.00	0.00	0.00	0.00	
EU 4-5	0.184	0.0920	0.00	0.00	0.00	0.00	0.00	0.00	
EU 4-7	147.2	72.2	0.701	0.3504	4.906	0.00	0.00	0.00	
EU 5-1	611	67	0.00	0.00	0.00	0.00	0.00	0.00	
EU 5-3	95.7	95.7	0.00	0.00	0.00	0.00	0.00	0.00	
EU 5-4	306	33.5	0.00	0.00	0.00	0.00	0.00	0.00	
EU 5-6	335	33.5	0.00	0.00	0.00	0.00	0.00	0.00	
EU 6-5	0.00	0.00	0.00	0.00	43.8	0.00	0.00	0.00	
EU 7-1	23.7	23.7	0.00	0.00	0.00	0.00	0.00	0.00	
EU 7-4a	5.32	5.32	546	0.00	55.2	0.00	0.00	0.00	
EU 7-4b	3.55	3.55	197	0.00	36.8	0.00	0.00	0.00	5.650
EU 7-5	0.00	0.00	0.00	0.00	622	0.00	0.00	0.00	
EU 7-6	34.3	34.3	0.00	0.00	0.00	0.00	0.00	0.00	
EU 7-7	23.7	23.7	0.00	0.00	0.00	0.00	0.00	0.00	
EU 7-8	5.91	5.91	328.50	0.00	61.32	0.00	0.00	0.00	9.417
	<b>PM</b>	<b>PM-10</b>	<b>SO2</b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>Lead</b>	<b>Mn</b>	Isoproben
EU 1-4, 10-1, 10-2	0.373	1.49	0.118	19.6	1.08	16.5	0.00	0.00	Subtotal HAPs
EU 5-2	46.4	46.4	0.00	0.00	75.50	0.00	0.00	0.00	0.368
EU 5-8, 6-2, 6-3, 7-2	25.7	20.7	5.60	8.80	0.100	0.000	0.00	0.00	<b>47.3</b>
7-3, 7-6, 8-1 & 9-1									
Other Insig	12	12	0.50	5.50	11	15.00			5.00
Insig Nat Gas	0.469	1.88	0.15	24.70	1.36	20.70			0.463
<b>Total</b>	<b>6007</b>	<b>1846</b>	<b>1083</b>	<b>60.90</b>	<b>1100.75</b>	<b>52.20</b>	<b>9.20</b>	<b>2.07</b>	<b>15.07</b>
	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
	<b>PM</b>	<b>PM-10</b>	<b>SO2</b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>Lead</b>	<b>Mn</b>	<b>Isopropo- benzene</b>
<b>Total HAPs Coating+ Insig Act. + Process =</b>				<b>79.5</b>	<b>tons/yr</b>				

Significant Emission Units	Controlled Potential Emissions								
	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Lead (tons/yr)	Mn (tons/yr)	
EU 1-1	82.8	79.1	0.00	0.00	0.00	0.00	9.20	2.07	
EU 1-2	55.2	55.2	0.00	0.00	0.153	0.00	0.00	0.00	
EU 1-3	36.8	33.1	0.00	0.00	0.00	0.00	0.00	0.00	
EU 1-4	0.366	0.366	0.00	0.00	0.00	0.00	0.00	0.00	
EU 2-1	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 2-2	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 2-3	2.924	2.047	0.00	0.00	36.8	0.00	0.00	0.00	
EU 2-4	15.69	2.35	0.00	0.00	0.00	0.00	0.00	0.00	
EU 2-5	0.0650	0.0650	0.00	0.00	0.00	0.00	0.00	0.00	
EU 2-6	0.260	0.260	0.00	0.00	0.00	0.00	0.00	0.00	
EU 2-7	18.4	9.02	0.088	0.0438	0.613	0.00	0.00	0.00	
EU 3-1	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 3-2	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 3-3	3.55	2.485	0.00	0.00	44.7	0.00	0.00	0.00	
EU 3-4	18.83	2.82	0.00	0.00	0.00	0.00	0.00	0.00	
EU 3-5	0.158	0.0788	0.00	0.00	0.00	0.00	0.00	0.00	
EU 3-6	0.260	0.260	0.00	0.00	0.00	0.00	0.00	0.00	
EU 3-7	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
EU 3-8	92.0	45.1	0.438	0.219	3.07	0.00	0.00	0.00	
	<b>PM</b>	<b>PM-10</b>	<b>SO2</b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>Lead</b>	<b>Mn</b>	
EU 4-1	2.75	1.35	0.657	0.329	4.60	0.00	0.00	0.00	
EU 4-2a	73.6	36.0	0.526	0.263	3.68	0.00	0.00	0.00	
EU 4-2b	0.732	0.361	0.00	0.00	0.00	0.00	0.00	0.00	
EU 4-3	6.27	4.39	0.00	0.00	78.8	0.00	0.00	0.00	
EU 4-4	22.0	3.29	0.00	0.00	0.00	0.00	0.00	0.00	
EU 4-5	0.184	0.0920	0.00	0.00	0.00	0.00	0.00	0.00	
EU 4-7	2.94	1.44	0.701	0.3504	4.906	0.00	0.00	0.00	
EU 5-1	2.44	0.268	0.00	0.00	0.00	0.00	0.00	0.00	
EU 5-3	5.692	5.692	0.00	0.00	0.00	0.00	0.00	0.00	
EU 5-4	1.221	0.1339	0.00	0.00	0.00	0.00	0.00	0.00	
EU 5-6	1.339	0.1339	0.00	0.00	0.00	0.00	0.00	0.00	
EU 6-5	0.00	0.00	0.00	0.00	43.8	0.00	0.00	0.00	
EU 7-1	0.260	0.260	0.00	0.00	0.00	0.00	0.00	0.00	
EU 7-4a	0.0638	0.0638	0.437	0.00	55.2	0.00	0.00	0.00	
EU 7-4b	0.039	0.039	0.394	0.00	36.8	0.00	0.00	0.00	5.650
EU 7-5	0.00	0.00	0.00	0.00	622	0.00	0.00	0.00	
EU 7-6	0.377	0.377	0.00	0.00	0.00	0.00	0.00	0.00	
EU 7-7	0.260	0.260	0.00	0.00	0.00	0.00	0.00	0.00	
EU 7-8	0.065	0.065	0.657	0.00	61.32	0.00	0.00	0.00	9.417
	<b>PM</b>	<b>PM-10</b>	<b>SO2</b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>Lead</b>	<b>Mn</b>	
EU 1-4, 10-1, 10-2	0.373	1.49	0.118	19.6	1.08	16.5	0.00	0.00	0.368
EU 5-2	0.697	0.697	0.00	0.00	75.5	0.00	0.00	0.00	
EU 5-8, 6-2, 6-3, 7-2	25.7	20.7	5.60	8.80	0.100	0.000	0.00	0.00	
7-3, 7-6, 8-1 & 9-1									
Insig Nat Gas	0.469	1.88	0.15	24.70	1.36	20.70			0.463
Other Insig	12	12	0.50	5.50	11	15.00			5.00
<b>Total</b>	<b>947</b>	<b>549</b>	<b>12.5</b>	<b>60.9</b>	<b>1101</b>	<b>52.2</b>	<b>9.20</b>	<b>2.07</b>	<b>15.1</b>
	<b>PM</b>	<b>PM-10</b>	<b>SO2</b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>Lead</b>	<b>Mn</b>	<b>Isopropo- benzene</b>
<b>Total HAPs Coating+ Insig Act. + Process =</b>				<b>79.5</b>	<b>tons/yr</b>				

Significant Emission Units	Limited and Controlled Potential Emissions								
	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Lead (tons/yr)	Mn (tons/yr)	
EU 1-1	37.5	79.1	0.000	0.000	0.000	0.000	9.198	2.070	
EU 1-2	55.2	55.2	0.000	0.000	0.153	0.000	0.000	0.000	
EU 1-3	36.8	33.1	0.000	0.000	0.000	0.000	0.000	0.000	
EU 1-4	14.9	0.366	0.000	0.000	0.000	0.000	0.000	0.000	
EU 2-1	92.0	45.1	0.438	0.219	3.066	0.000	0.000	0.000	
EU 2-2	92.0	45.1	0.438	0.219	3.066	0.000	0.000	0.000	
EU 2-3	2.92	2.05	0.000	0.000	36.792	0.000	0.000	0.000	
EU 2-4	3.160	2.353	0.000	0.000	0.000	0.000	0.000	0.000	
EU 2-5	0.065	0.065	0.000	0.000	0.000	0.000	0.000	0.000	
EU 2-6	0.260	0.260	0.000	0.000	0.000	0.000	0.000	0.000	
EU 2-7	18.396	9.023	0.088	0.044	0.613	0.000	0.000	0.000	
EU 3-1	92.0	45.1	0.438	0.219	3.066	0.000	0.000	0.000	
EU 3-2	92.0	45.1	0.438	0.219	3.066	0.000	0.000	0.000	
EU 3-3	5.17	2.49	0.000	0.000	40.000	0.000	0.000	0.000	
EU 3-4	6.660	2.824	0.000	0.000	0.000	0.000	0.000	0.000	
EU 3-5	0.158	0.079	0.000	0.000	0.000	0.000	0.000	0.000	
EU 3-6	0.260	0.260	0.000	0.000	0.000	0.000	0.000	0.000	
EU 3-7	92.0	45.1	0.438	0.219	3.066	0.000	0.000	0.000	
EU 3-8	92.0	45.1	0.438	0.219	3.066	0.000	0.000	0.000	
EU 4-1	2.746	1.347	0.657	0.329	4.599	0.000	0.000	0.000	
EU 4-2a	37.4	18.3	0.526	0.263	3.679	0.000	0.000	0.000	
EU 4-2b	0.187	0.092	0.000	0.000	0.000	0.000	0.000	0.000	
EU 4-3	6.265	4.386	0.000	0.000	78.840	0.000	0.000	0.000	
EU 4-4	21.965	3.295	0.000	0.000	0.000	0.000	0.000	0.000	
EU 4-5	0.184	0.092	0.000	0.000	0.000	0.000	0.000	0.000	
EU 4-7	2.9	1.4	0.701	0.350	4.906	0.000	0.000	0.000	
EU 5-1	5.50	0.268	0.000	0.000	0.000	0.000	0.000	0.000	
EU 5-3	5.500	5.692	0.000	0.000	0.000	0.000	0.000	0.000	
EU 5-4	9.900	0.134	0.000	0.000	0.000	0.000	0.000	0.000	
EU 5-6	1.339	0.134	0.000	0.000	0.000	0.000	0.000	0.000	
EU 6-5	0.000	0.000	0.000	0.000	43.800	0.000	0.000	0.000	
EU 7-1	0.260	0.260	0.000	0.000	0.000	0.000	0.000	0.000	
EU 7-4a	0.029	0.029	0.198	0.000	*	0.000	0.000	0.000	
EU 7-4b	0.027	0.027	40.000	0.000	25.000	0.000	0.000	0.000	5.650
EU 7-5	0.000	0.000	0.000	0.000	25.000	0.000	0.000	0.000	
EU 7-6	0.377	0.377	0.000	0.000	0.000	0.000	0.000	0.000	
EU 7-7	0.260	0.260	0.000	0.000	0.000	0.000	0.000	0.000	
EU 7-8	22.0	13.5	**	0.000	*	0.000	0.000	0.000	3.839
									<b>Subtotal HAPs</b>
EU 1-4, 10-1, 10-2	0.373	1.490	0.118	19.600	1.080	16.500	0.000	0.000	0.368
EU 5-2	0.697	0.697	0.000	0.000	75.500	0.000	0.000	0.000	47.3
EU 5-8, 6-2, 6-3, 7-2 7-3, 7-6, 8-1 & 9-1	25.7	20.7	5.60	8.80	0.100	0.000	0.00	0.00	
Other Insig	12	12	0.50	5.50	11	15.00			5.00
Insig Nat Gas	0.469	1.88	0.15	24.70	1.36	20.70			0.463
<b>Total</b>	<b>889.4</b>	<b>544.3</b>	<b>51.2</b>	<b>60.9</b>	<b>370.8</b>	<b>52.2</b>	<b>9.20</b>	<b>2.07</b>	<b>9.49</b>
	(tons/yr) PM	(tons/yr) PM-10	(tons/yr) SO2	(tons/yr) NOx	(tons/yr) VOC	(tons/yr) CO	(tons/yr) Lead	(tons/yr) Mn	Isopropo- benzene

**Total HAPs Coating+ Insig Act. + Process = 73.9 tons/yr**

\* VOC limit for EU 7-4a, EU 7-4b & 7-8 combined < 25 TPY.

\*\* SO2 limit for EU 7-4b & 7-8 is a combined less than 40 TPY.

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100  
Small Industrial Boiler**

**Company Name: RMG Foundry, LLC d/b/a RMG Foundry  
Address City IN Zip: 500 South Union Street, Mishawaka, Indiana 46544  
Part 70: T 141-6087  
Plt ID: T141-00007  
Reviewer: Mark L. Kramer  
Date: June 6, 1996**

EU 1-4 (Scrap Preheater - 12.0 MMBtu/hr), EU 10-1 (16.4 MMBtu/hr), and EU 10-2 (16.4 MMBtu/hr)

Heat Input Capacity                      Potential Throughput  
MMBtu/hr                                      MMCF/yr

44.8    392

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.373	1.49	0.118	19.6	1.08	16.5

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	0.00210	0.00120	0.0750	1.80	0.00340
Potential Emission in tons/yr	0.000412	0.000235	0.0147	0.353	0.000667

HAPs - Metals					
Emission Factor in lb/MMcf	Lead	Cadmium	Chromium	Manganese	Nickel
	0.000500	0.00110	0.00140	0.000380	0.00210
Potential Emission in tons/yr	0.0000981	0.000216	0.000275	0.0000746	0.000412

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.



**HAP Emission Calculations**

**Company Name:** RMG Foundry, LLC d/b/a RMG Foundry  
**Plant Location:** 500 South Union Street, Mishawaka, IN 46544  
**Part 70:** T 141-6087  
**Plt ID:** T 141-00007  
**County:** St. Joseph  
**Permit Reviewer:** Mark L. Kramer  
**Date:** June 6, 1996

Material	Density (lbs/gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Flash-off (fraction)	Weight % Ethyl Benzene	Weight % Xylene	Weight % MIBK			Ethyl Benzene Emissions (tons/yr)	Xylene Emissions (tons/yr)	MIBK Emissions (tons/yr)		
<b>EU 5-2 (Foundry Paint Booth)</b>														
E61GC702	11.93	5.00	1.00	1.00	2.00%	12.1%	4.00%			5.23	31.6	10.5		

Total State Potential Emissions

															Total HAPS
<b>TOTALS:</b>	<b>(tons/yr):</b>									<b>5.2</b>	<b>31.6</b>	<b>10.5</b>	<b>0.0</b>	<b>0.0</b>	<b>47.3</b>
															(tons/yr)

**Methodology:**

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100  
Small Industrial Boiler**

**Company Name: RMG Foundry, LLC d/b/a RMG Foundry  
Address City IN Zip: 500 South Union Street, Mishawaka, Indiana 46544  
Part 70: T 141-6087  
Plt ID: T 141-00007  
Reviewer: Mark L. Kramer  
Date: June 6, 1996**

Insignificant Activities: Natural Gas Combustion (See TSD Insignificant Activities (a))

Heat Input Capacity                      Potential Throughput  
MMBtu/hr                                      MMBtu/yr

56.3    493

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.469	1.88	0.148	24.7	1.36	20.7

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	0.00210	0.00120	0.0750	1.80	0.00340
Potential Emission in tons/yr	0.000518	0.000296	0.0185	0.444	0.000839

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	0.000500	0.00110	0.00140	0.000380	0.00210
Potential Emission in tons/yr	0.0001234	0.000271	0.000345	0.0000938	0.000518

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.